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A PHILOSOPHY OF
THERAPEUTICS

A PHILOSOPHY OF THERAPEUTICS

THE FOUNDATION OF WHICH RESTS UPON THE
TWO POSTULATES: FIRST, THAT IT IS THE HUMAN
ORGANISM THAT IS THE ACTIVE FACTOR IN THE
HEALING OF THE SICK, AND NOT DRUGS, AND
SECOND, THAT THERE ARE TWO THERAPEUTIC
LAWS :: :: :: :: :: :: :: :: :: ::

BY

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BALTIMORE, MD.

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*I search for truth, by which a man never yet was
harmd.—Marcus Aurelius.*

Contraria contrariis curantur.—Galen.

Similia similibus curantur.—Hahnemann.

THIS BOOK IS GRATEFULLY DEDICATED
TO THE
MEMORY OF THOSE IMMORTALS,
GALEN AND HAHNEMANN,
TO WHOM THE MEDICAL PROFESSION IS INDEBTED
FOR THE
KNOWLEDGE WHICH PERMITS A SYSTEMIZATION
OF THE
PRACTICE OF MEDICINE.

PREFACE

It is always expected that an author will give some reason for his work. My object in submitting this effort to the medical profession is because I believe such a work is needed. In what may be found herein all intention of hypercriticism of any special school of medicine is disclaimed. The author believes the time has come for an understanding between the various schools and sects in medicine; for the throwing down of all artificial and illogical barriers between thoughtful, scientific men who are really searching for truth. This does not mean that any school or sect should become subservient to or be absorbed to extinction by another; but it does mean that the medical profession as a whole should be too broad to allow petty theories and intolerance to separate brothers in a common cause.

Of course I refer especially to the differences of views existing between the two chief divisions of the medical profession, the elder or "allopathic" school and the younger or "homoeopathic" school. Each of these great

bodies has a pride in its traditions and in its interpretation of things scientific, and neither can be expected to yield supremacy to the other in this day of intellectual freedom. The older school man often delights in derisively calling his younger brother a "homoeopath," just as the other revenges himself by calling the elder an "allopath." Neither of these two men think whether or not these epithets properly apply; they have been educated in different colleges and have caught these convenient terms from their teachers, and thoughtlessly they apply them, when in point of fact neither knows just exactly what is the therapeutic view of the other and in many instances is not altogether clear as to his own medical creed.

These men typify the majority of medical practitioners of the present day, but fortunately, however, they are followers of a minority (as is the case with all majorities) and it is to the minority that appeal must be made. The only way for two bodies of men who apparently believe differently, to recognize whatever there may be of truth in their respective ideas, is for each of these two bodies to mutually examine and dispassionately study the beliefs of the other.

It may be supposed that the colleges should teach all there is good in medicine, regardless

of "pathy;" all there is of the principles of therapeutics upon which drugs are daily prescribed, and from which cures result. And so they should; but they do not.

In proof of this it is only necessary to state further—and from investigation there is no fear of refutation—that a surprisingly large number of medical practitioners do not know how many therapeutic principles there are, and of the few who do know, a very small percentage can give an intelligent explanation which will differentiate these principles one from the other. This statement is applicable to no particular school, but to all.

Is it, therefore, remarkable that the individuals of the two dominant schools are confused in their understanding—or lack of understanding—of the epithets they use; or is it strange that the schools should stand afar off and show no desire to investigate seriously each other's beliefs?

In his effort to make plain some of these uncertainties, and to discuss some other debatable questions, the author lays no claim to more knowledge than is possible for any man with common sense if he will but take a little time to systematically survey this corner of the great field of philosophy.

We have reached a point in the history of medicine when the principles upon which thought and action in therapeutics are based, should be systematized for the use of all medical practitioners, whether they be "allopaths," "eclectics," or "homoeopaths." In fact, all prevalent therapeutic methods should be taught in all medical colleges; but *fairly* and *correctly* taught.

Whether intelligently or ignorantly, all principles and efficient methods of healing the sick are daily practiced by a large majority of all the individual representatives of all the schools of medicine. This being true, there must be good in all these different ways of practicing medicine. Why should we not, therefore, be honest and acknowledge this, and in so far as we are ignorant of the limitations and the possibilities of these various principles and methods, inform ourselves of how to apply them intelligently? The inexpert and clandestine use of agencies of which we avowedly disapprove, is far more censurable than their intelligent and acknowledged application.

Hahnemann was a great reformer of the therapeutic abuses of his day, and there were many. The reform he instituted has to a very large extent done the work intended and expected by him. It is, therefore, unnecessary

to wage continuous and unrelenting warfare against those of this century who do not think as Hahnemann did more than a hundred years ago, whether they be of the "homoeopathic" or of the "allopathic" school. It is claimed that much of the practice of the latter is derived from the former, but it must in all fairness also be recognized that much is the product of scientific deduction not that of Hahnemann, and it is doubtful if anything better can be put into its place.

There are even yet some Pharisees in our household, men who would take the *mote* out of their brother "allopath's" eye, while they fondly cherish the *beam* that obscures their own vision. They can see the shortcomings of a brother, but they fail to see that when they use all sorts of heterodox expedients and then credit homoeopathy with whatever good may result therefrom (only in case good does result, however), that they are no better than the "allopath" who steals the thunder of homoeopathy (and the lightning too) and fails to credit his authority. Such men do not appreciate the therapeutic import of the law of similars and they continuously insult science by foisting upon homoeopathy the bastard progeny of clinical observation, which has no relation to the law of similars.

All men never have believed and never will believe alike on any one vital point, and it is by no means desirable that they should do so. Men are accountable in proportion to the knowledge they have. If, therefore, the "allopath" thinks the "homoeopath" a fool, let him set before the unconverted the facts upon which his faith is based; if the "homoeopath" believes the "allopath" to be a fool, let him deal in the same sensible manner with the unconverted. If, however, neither will seriously consider the views of the other, then the correct thinker (whichever he may be) cannot be held responsible for the ignorance of his brother. If, however, each tries to force the other to his way of thinking, by scorn, by ridicule, unfair legislation or social ostracism, then will neither be convinced of anything but that the other is a fool.

We are too prone to dogmatize, and are continually evading the possibility of the existence of certain laws of which we know nothing. Were our premises all correct, our deductions, if logically made, would be truth; but unfortunately for human vanity, man has not yet attained omniscience. The day of dogmatism in medicine is past; what is needed are facts, conditions and things, that can be demonstrated to all educationally qualified intelligences and such demonstrations can be made only when

investigation is conducted in the spirit of true science. The time for a rational attitude has come; for the establishment of a platform, a scientific plane upon which all properly educated medical men may stand.

In conclusion, it is proper to explain that four of the chapters herein include in the contents, with some corrections, material that has been published heretofore, though in a different connection. Chapter VIII considers the subject of primary and secondary drug effects, which discussion was submitted to the International Homoeopathic Congress in 1900, and subsequently published in the *North American Journal of Homoeopathy*; Chapters IX and X include papers in which a critical examination of physiological drug tests is discussed, and which papers were published in the *Hahnemannian Monthly* and the *Southern Journal of Homoeopathy*, respectively; and Chapter XI embodies remarks on a lack of faith in the art of medicine, which were read before the American Institute of Homoeopathy in 1901, and later appeared in the *Hahnemannian Monthly*.

And now, the author makes his bow with a degree of hesitancy due to an appreciation of the importance of the subject presented, the little he feels is known of law in relation to

therapeutics, and his comparative ignorance of the vast field into which the mind of man has penetrated so short a distance.

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INTRODUCTION

It is not my purpose to enter into a history of medicine, to tell of the various men who have adorned the pages of history with their views of therapeutics and their practices, nor to enter into a discussion of the many schools of thought and theory that have swayed the medical mind since the days of Hippocrates. This ground has been covered many times in the past. My purpose is simply to endeavor to lay before the student in pupilage, and also the student of older growth, some of the ideas that have been taking shape for many years, of what the physician should know when he essays to heal the sick. There are certain essentials of knowledge without which he will not reach the fullest degree of wise development of which he may be capable, and without which also he is not prepared to decide upon the correctness of the new views that are constantly being presented for his consider-

ation, in the field of therapeutic philosophy.

It is as essential for the surgeon to know when not to cut as when to cut, it is as essential for the therapist to know when not to give certain drugs as when to give them, and it is no less necessary for the novice in medicine to know what are not fundamental principles, and what are not logical and probable theories, as to know what is obviously correct.

The needs of the physician of the past and the needs of the physician of the present are not the same. The physician of the past overcame many obstacles that lay athwart the pathway of progress, and while he may have innocently placed others of little less hindrance to the truth-seeker of the future, yet on the whole he has left a rich heritage of facts for the consideration of his posterity, which but need proper systematizing to mould into a philosophy more forceful and logical than the past has known.

Until about 400 B. C. medicine and philosophy were interwoven, and for the separation we have to credit Hippocrates. I am not convinced, however, that such an act

was really a service to the medicine of that day, because without philosophy the little knowledge of medicine was then so meagre that therapeutics must have suffered by the loss, and the little good the physician might have done the patient through his moral nature, (through unconscious hypnotic suggestion, perhaps), was rendered less by this very abstraction of the regnant philosophy, however dogmatic, metaphysical and false in its foundation. Certain it is that the therapeutics of the day succeeding this divorce were decidedly anæmic. This separation, however, of a dogmatism which paraded as philosophy, was really paving the way for the ultimate establishment of a more practical and truer philosophy of medicine than had ever yet been evolved by the mind of man, and which has continued to be modified and moulded into varied shapes until it has attained the status awarded it today, which status the attempt is herein made to interpret as correctly as the logic of known facts will permit.

As the study of the general science of human duty should form the foundation of

the education of all cultured society, so should a study of medical ethics form the foundation of the education of the physician.

The great principles upon which medical ethics are based are these:

“1. The great end and object of the physician’s effort should be: ‘The greatest good to the patient.’

“2. The rule of conduct of physician and patient, and of physicians toward each other should be the golden rule: ‘As ye would that men should do to you, do ye also to them, likewise.’”

Were every practitioner of medicine to keep constantly before him these two great fundamental principles, and conscientiously endeavor to make them his living guides, the medical profession today would be in point of fact, one of the most worthy of all exponents of science.

Obedience to the second principle would make of every physician a tolerant truth-seeker, willing to admit his fallibility, while at the same time he would accord his brother the right to opinions in which he could not concur, and yet peace would exist between

them. The honesty of purpose of each would compel the respect and consideration of the other. In fact, physicians could live in strict accord with this animus, and yet recognize the wisdom of the existing two-fold relationship between colleagues; a two-fold kinship which may be defined as, first, a personal relationship, and second, an impersonal or strictly professional relationship. While both these relationships have an ethical foundation, yet a physician may acknowledge the professional standing and ability of a colleague and meet him in the work and duties of medical fraternities, but not entertain a personal friendship. Perhaps such a double relationship should be merged into one permitting of no reservations, but rather than allow personal antipathy to debar one from the rights and privileges of medical organizations, it is practicable and wise to sanction such distinctions.

I have no intention to prose or to preach a sermon, but simply to call attention to the fact that a study of the principles of ethics by which our profession is supposed to be

governed is censurably neglected. These principles should be as deeply grounded in the medical pupil as was the multiplication table more than a quarter of a century ago drummed into the little boy fathers of the present generation. To speak even more strongly, no physician can be a gentleman who is not unconsciously governed by these fundamental principles, and no man should be a physician who is not a gentleman.

The first principle, however, which is substantially the foundation of this treatise, demands serious consideration from all who expect to make a practical study of medicine: "The great end and object of the physician's efforts should be, 'The greatest good to the patient.'"

It is, many times, most difficult to decide what is "the greatest good to the patient." Beginning with Hippocrates, all manner of suggestions, theories and dogmas have been taught with this end in view, but no one method has been accepted by all therapeutists. This great variety of belief on a subject which is of such importance to the human race—the healing of the sick—is due

to several factors; first, the unreliability of human testimony, second, a lack of complete knowledge of the physiological processes of the human economy, third, ignorance of the real character of modification of these physiological processes which it is possible to cause by drugs, and fourth, imperfect knowledge of the pathology of many natural diseases.

Knowledge is the result of experience of one kind or another, and experience results from observation made by the special senses, submitted to the reasoning powers and ultimately assigned its position or value by the judgment. It is, therefore, obvious that the acquirement of correct knowledge depends upon correct observation and a correct judgment; and in turn these depend upon a careful training of the special senses for the work they are to do, and a no less careful training of the judgment.

These facts were not recognized by the medical philosophers, the experimenters in drug pathogenesis and the clinicians of the past; or, at least, they made no practical application of these facts. In consequence

a harmonious consensus of opinion among medical men has never been reached as to how "the greatest good to the patient" is to be secured.

One of the earliest needs of the embryo physician is to endeavor to acquaint himself with the source of the materials and the indications for the use of the materials with which he is to attempt to heal the sick. This, of course, includes a knowledge of all that is known at the present day of how to practice medicine, a knowledge that is at best imperfect, but a knowledge that at least prepares him for initiation into his life work, qualifies him to stand for *all* there is good in medicine, and enables him to intelligently endeavor to secure "the greatest good to the patient."



CHAPTER I.

The First Use of Drugs Unknown—That Which is to be Cured—The Significance of Diagnosis—"Totality" of Symptoms a Misleading Term.

It is impossible to do more than guess at how men first began to use drugs in the healing of the sick, and as this is not a history of medicine it must suffice to simply call attention to the fact that whatever experiments were made in the earliest times, were most probably not made upon healthy human beings, but upon the sick. Observations of this character, together with possible effects observed by accident in the lower animals, doubtless formed the foundation of whatever knowledge was possessed by persons who attempted to heal the sick in the early days of man.

All kinds of theories of drug action were elaborated in those early days (the superstitions of the times often playing an important part) for the purpose of justifying the

use of various agents in sickness, which agents included charms, amulets, incantations, parts of the bodies of animals both real and chimerical, herbs gathered under special lunar conditions, impossible alchemical products, etc., etc.

The deliberate testing of drugs upon the healthy human being did not seem to occur to the medical profession—except in cases where condemned criminals were appropriated for the purpose of observing the effects of certain toxic drugs—until the end of the eighteenth century. It was then that Samuel Hahnemann insisted that the only way to discover what influence drugs really have upon the healthy human organism, was to give them to the approximately healthy human being for the deliberate purpose of observing their effects. With the assistance of others he put his belief to the test, with the result of obtaining an astonishing number of supposed symptoms from many drugs, the symptoms in some instances being both objective and subjective.

Of the merits of these early experiments with drugs it is unnecessary to express an

opinion at this juncture, but the idea of this source of drug effects meeting with the approval of such men as Jonathan Pereira, H. C. Wood and now all modern writers on physiological medicine, establishes beyond dispute the fact that if we wish to use a drug in disease we should first know what it will do when given to the healthy.

That some information may be gained from experiments upon the lower animals cannot be doubted, but such experiments must always be either suggestive or corroborative merely. Man is a being unto himself, with certain physical and possibly even mental traits in common with other animals, yet with a mental and a physiological individuality possessed by no other living organism. If, therefore, this organism is to be restored to normal health, when suffering from derangement, it is necessary to know all that is possible of the agent which is to be used for the cure, and there is no way yet suggested from which more information may be extracted than by experiments made with this agent upon a similar organism when in health.

A question which has caused more or less discussion is: What is the therapist to cure?

It is always to be remembered that the first duty of the physician is to ascertain whether the original cause of the disturbance is still continuing, and if so to remove this cause. Having done this and the morbid condition continuing, he is now prepared to take into consideration the question above propounded.

Some have held that it is a disease entity that demands attention, some that the symptoms of the malady constitute the malady and that when these are removed the patient is well again, others think the pathological condition must be changed to normal regardless of the symptomatology, and others again, believe the temperament, character and past and present condition of the patient must all be considered, and hence that it is the patient to be treated and not the disease.

The hypothesis that disease is an independent entity has long since been abandoned, and consequently we are left to decide

between pathology, symptomatology, and the patient, as the subject for the therapist's consideration.

The human body in its various organs and tissues is subject to varied changes; if a detectable organic change has occurred the therapist cannot know too much about the state of the general organism, as well as about the part which is chiefly involved. He must know the past history of the patient, the habits of life, hereditary tendencies, present condition of the diseased part and of all other organs and tissues which may by any possibility be involved, together with any additional objective and subjective manifestations of the patient which may serve to convey information of the state of the general organism, or of the focus of the disturbance. It, therefore, becomes necessary that the therapist consider the whole patient in deciding upon the measure he is to adopt for the cure, as it is not only the specially involved organ that is to be cured, but the whole organism of which the chief focus of the disease may be but a part, and hence it becomes obvious that it is the

patient and not the disease that is to be cured. Typhoid fever furnishes an excellent example of general derangement of the organism.

There are, however, certain conditions which may be regarded as of minor importance, concerning which it is not always necessary to enter so extensively into a consideration of the whole organism; such, for example, as acute gastric indigestion, slight functional circumscribed nerve pain, carious teeth, etc. In these cases measures may readily be adopted which will give relief without the therapist knowing anything whatever of the individuality of the sufferer, e. g., pepsin may relieve the gastric disturbance, locally applied heat the neuralgia, and dental forceps the aching tooth. Though in the gastric disturbance and the neuralgia it is the assertion of the inherent vital force of the patient upon which the relief depends, and even in these cases the whole organism is more or less affected and as the whole organism constitutes the patient, so it is the patient that is cured even in such apparently trivial cases of local suffering. The aching

tooth is no exception, for the offending member causes more or less depression of the vitality of the whole organism by consuming, wasting, the general supply of nerve force, and the extraction does not alone relieve the particular nerve filament that is involved, but the whole organism, the patient, regains a normal health equilibrium after the removal of the offender.

As to the symptom *per se* constituting the disease, there is no proof. It is true that in simple neuralgia, there is nothing in evidence but pain, and when the pain is relieved permanently the abnormal condition is cured; but it is reasonable to suppose that there has been a cause for the pain, and that before the pain has subsided this cause must have been removed. It is quite true that there may be certain conditions which are discoverable only through symptoms, but the relief of these symptoms does not constitute a cure of the condition from which they have arisen. On the other hand, certain conditions may exist from which no symptoms arise; for example, dilatation of the stomach, a slightly moveable kidney, or even

insufficiency of the cardiac valves, and cases of malignant degeneration have existed for a long time unsuspected until a few days prior to death, without having caused either objective or subjective symptoms.

The conclusion, therefore, becomes obvious, that the therapist has to do with the patient as that which has to be cured, although there are comparatively minor conditions of a purely circumscribed character, which do not require as thorough an understanding of the patient as other graver conditions involving the organism to a more serious extent, yet, nevertheless, the therapist should not lose sight of the fact that it is the paramount purpose of his art to "heal the sick," to cure the *patient*.

THE SIGNIFICANCE OF DIAGNOSIS.

The significance of diagnosis in relation to therapeutics is another subject that has caused more or less discussion. It would seem to be a self-evident fact that the physician should learn all it is possible to know of the condition of the patient to be

treated; but all that it is possible to discover and all there really is of derangement, do not always include the same amount of knowledge. Of some of the diseases of the human organism we are probably as familiar as we ever will be, and in such conditions it is, therefore, possible to make a correct diagnosis of the essential details that go to make up the total derangement of the patient; but there are conditions that at times puzzle even the best of diagnosticians.

Cases of this latter class have caused the therapist to hesitate before making a prescription, and yet such cases have sometimes yielded to treatment which has been addressed to the most prominent manifestations of disturbance, that have, nevertheless, not had their origin interpreted. And, furthermore, cases have sometimes been cured when treated in a belief of a foundational pathology that did not exist. At a day not remote, congestive neuralgia was thought to be very common, whereas it is now known that neuralgia is most frequently due to anæmia of nerve tissue; but many cases of neuralgia have been cured on this

mistaken diagnosis of pathology. Puerperal convulsions were, until comparatively recently, supposed to be due to cerebral congestion, and not anæmia, as autopsies now show; and there is no doubt cures sometimes followed treatment based upon this mistaken view.

It is never wise for the therapist to close his eyes to facts, and while he must acknowledge the impossibility of perfect diagnosis and perfect therapeusis, in which a "totality" of the condition constituting the diseased patient, and a "totality" of the pathogenetic effects of the indicated drug should correspond completely, yet he should cultivate every means for approximating correct diagnosis. It is doubtful, however, if he will ever know enough to be sure of this double "totality," for *every* detail of pathological expression and of drug pathogenetic expression, including both objective and subjective semeiology, must be known before the conditions are satisfied. The use of this term "totality," whether applied to natural disease or to drug disease, may therefore be

regarded as misleading, and should be avoided by the scientist.

Both the homoeopathic and the antipathic relationships are relationships of many degrees, and when attempting to prescribe in accordance with either of these relationships a correct expression consistent with modern science would be, instead of totality, majority. The "covering" of the *majority* of pathological manifestations is the nearest we will probably ever approach a totality.

While diagnostic ability is one of the necessary qualifications of the modern physician, yet it must be remembered that the purpose of diagnosis is quite as much for aiding in outlining the general regimen of the patient and for prognostic purposes, as it is for the selection of the means of cure. To the therapist the most important thing to be considered is whether or not there are drugs that will bear, in their effects upon the healthy human organism, a sufficiently decided similarity or dissimilarity, as the case may be, to morbid manifestations in the sick to justify their use in therapeutics.

The attempt to base therapeutics exclusively upon the diagnosis of pathological conditions, is one of the reasons why we find in some of our text-books of medical practice such pessimistic views of the curative value of drugs. Of course, it must be remembered that these remarks are entirely from the standpoint of the physician and not that of the surgeon.

There are times when the physician is compelled—because of the obscurity of the local disturbance which may exist—to accept the general expression of the patient's condition, and to prescribe without demonstrable knowledge of the condition of the suspected tissue. Here it is that correct and accurate knowledge of drug pathogenesis is needed, and here it is that at times such knowledge renders therapeutics successful despite the absence of diagnosis. In such cases either spontaneous recovery or dissolution would occur, did the physician wait until a correct diagnosis were made before prescribing for the patient.

Briefly, it may be concluded that a correct diagnosis is a most important aid to successful therapeutics, but that it is not absolutely indispensable.

CHAPTER II.

What Constitutes a Law—The Best Therapeutic Results Dependent Upon Systemization.

One of the facts that must sooner or later be realized by him who experiments in the field of drug pathogenesis, is that a law is not simply a relationship existing between a cause and an effect, but that a law is a relationship that depends upon several factors, the combining of which may be reduced to the following truism: The same effect will always follow the same cause, *if environment and all the conditions are the same.* The same cause may always be operative, but the same effect will not of necessity always follow unless the remaining terms of the problem are present. This is peculiarly true when dealing with the human equation, and those who have experimented in the various fields of psychology will recognize the truth of the observation. Doubtless this

will seem self-evident to some, but it is astonishing how many physicians have failed to recognize the fact.

Because a patient recovers after the administration of a given drug is not necessarily an evidence that the drug has caused the cure. All other probable, and even possible, causes of the cure must be eliminated before the drug may justly be given credit for the result. This is what many practitioners do not recognize, if we are to judge from the published records of cases. Fortunately this state of affairs is not now so prevalent as it was in the recent past, but the tendency to this careless manner of observing and reasoning has not yet been entirely eradicated. This point will be touched again in the coming pages.

In the application of drugs to the sick the physician should have practical facts at command, but to know the bare fact that certain effects really do follow the administration of certain drugs, should not be enough for the modern practitioner who is desirous of attaining a maximum degree of therapeutic effectiveness in his daily work. He

should be desirous of knowing whether or not some principle is at the foundation of the facts he daily observes, so that he may be able to systematize his prescribing in accordance with that principle, and thus increase his ability to secure "the greatest good to the patient."

It may not be possible, however, to formulate a demonstrable hypothesis at the initiation of an attempt to systematize isolated facts, but an *attempt* at least is necessary, or therapeutics must drift back into irrational experimentation.

It can hardly be imagined that any one, however lenient towards the weak points of the science or art of which he is supposed to be an exponent, would make a virtue of the absence of fundamental law or principle as a reason for the existence of that science or art. Such a position is logically untenable, and yet we find Shoemaker, in his most admirable "Materia Medica and Therapeutics," taking such a stand. He says: "The system of medicine which is studied as a department of natural science, and *which is unrestricted by any hypothesis or*

supposed law of cure, in its application of remedies to the treatment of disease, will undoubtedly vary somewhat in its results, according to the individual skill of its practitioners, the scientific attainments of the time, and the peculiarities of patients; but when statistics are correctly compiled from sufficiently large groups of cases it is easily demonstrated to be more successful than any restricted system which has been or can ever be brought in competition with it."

This attitude is not consistent with the requirements of modern thought; for no system has a right to exist as a system, unless it has at least some rational hypothesis or hypotheses as a working basis. Of course the physician should not be limited to a "restricted system" of therapeutics, but for accomplishing the best results his knowledge and his work must be in accordance with some principle or principles.

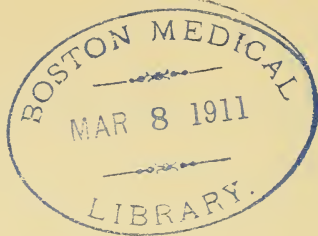
To know that a drug produces certain effects upon the healthy—whether among lower animals or human beings—, and that it also produces certain effects in the diseased, has little significance for the thera-

peutist unless some relationship between its pathogenetic effects and its therapeutic effects be clearly established, and if, as Shoemaker says, the "system of medicine" (whatever a "system" without an underlying principle or principles may mean), "is unrestricted by any hypothesis or supposed law of cure," then there is no relationship established between the results of drug physiological experiments and disease, and medicine becomes simply empiricism of the most uncertain kind, and may no longer be admitted as "a department of natural science."

But, fortunately for the future of medicine, several relationships have been claimed upon reasonable grounds as possible between drug pathogenetic effects and disease effects, and to ignore these claims would be unwise and unscientific.

If it can be demonstrated that such a relationship exists as an allopathic relationship, or an antipathic relationship, or an isopathic relationship, or a homoeopathic relationship, and that by the application of drugs in accordance with any one of these

relationships, good to the patient may be secured, and if it can also be demonstrated that drugs should not be prescribed indiscriminately in accordance with these various principles, it becomes the duty of the physician to know when and how to apply these principles. If, however, it can be as clearly demonstrated that such relationships do not exist, then they should be set aside for some method or methods, theory or theories, that can be sustained by facts. The postulate to be considered is that there are definite methods upon which to found a system of therapeutics, and the first to be examined is that of allopathy.



CHAPTER III.

Therapeutic Methods: Allopathy.

There is more confusion about the definition of this method of applying drugs to the sick than about any other. Not only is it misunderstood by the laity, but the medical profession generally has little understanding of allopathy, and strange as it may seem, few of those who are ignorantly classed as "allopaths" by the unthinking, could define the term. It is not uncommon to find in the writings of those who should be better informed, hopeless confusion of the terms "antipathy" and "allopathy."

Allopathy is not a law or a principle; it is a method of prescribing drugs. Hahnemann, in the initiation of his great reform, found the medical profession applying this method in the most excessive and indiscriminate manner imaginable, and it was this therapeutic abuse that led him to search for

some milder method of healing the sick. It was Hahnemann who gave the name "allopathy" or "alloeopathy" to this crude mode of practice, and as an acknowledgment of this criticism the criticised retaliated by calling the critic and his followers "homoeopaths."

Of the method under consideration, Hahnemann, in his *Organon* expresses himself as follows: "The second mode of employing medicines in disease, is that which I term the *alloeopathic*, or *heteropathic*, which has been in general use till the present time. Without ever regarding that which is really diseased in the body, it attacks those parts which are sound, in order to draw off the malady from another quarter, and direct it towards the latter." The method is here defined in a few words, but it is wise to elaborate a little more fully.

The application of the allopathic method is the creating of a morbid condition in one organ or tissue, for the purpose of relieving an already existing morbid condition in another organ or tissue, i. e., the relieving of one over-taxed or diseased organ by causing an-

other which is normal to take upon it the function of the diseased one.

The use of cathartics is usually in accordance with the principle of antipathy, i. e., when the bowels are purged for the purpose of removing the *opposite* condition of constipation; but as sometimes prescribed cathartics are given for allopathic purposes, that is, for causing the intestinal tract to evacuate its contents through over-stimulation of peristalsis and also an excessive flow of the *succus intestinalis*, which is supposed to act in a derivative manner for the good of the whole organism.

This idea of clearing out the *primae viae* was applied in the initiation of treatment of nearly all conditions, it mattered not what their nature might be. Corrective treatment then followed; sedatives and refrigerants if there were fever, tonics if the patient were depressed, etc., etc., but whatever else the physician might see fit to prescribe his first duty was to "*clear out the primae viae.*" Hence, as Dr. Dake in his "Therapeutic Methods" puts it, "What is

ninety-nine times in a hundred but an effect, has thus been looked upon as a cause," and where the effect—constipation—was treated as the cause, the case was not cured, in fact rarely benefited, for the secondary effect of the purgative would prove to be but an aggravation of the original constipative habit.

This idea of clearing out the *primae viae* being constantly foremost in the professional mind, was soon adopted by the laity, (because purgatives certainly do produce material results, and material results are what the average layman can understand), and even to this day we find people who invariably, every spring, as certainly as they have a house-cleaning, take what they term "physic," a purgative, and have an annual intestinal cleaning.

Purgation may be regarded as the keystone in the arch of the allopathic method; and for the foundation stones of the arch we may turn to diaphoresis and diuresis, respectively.

Next to the intestinal canal the allopathic method, as just remarked, calls upon

the skin and the kidneys most frequently to assist other laboring organs or tissues. For example, the patient has taken a "cold." There is general febrile movement, with inflammation of the respiratory tract from the anterior nares to the trachea or bronchi, accompanied by all the symptoms characteristic of such an invasion. A diaphoretic is prescribed. The patient goes to bed; he perspires, he sweats, and sweats, and sweats. If he have a strong constitution, (*vis medicatrix naturae*), and is fortunate enough not to be restless, he may wake next morning weak, but with his mucous membranes relieved of their engorgement; but woe be to him if he check the sweat by fanning the bed covers!

Again, a similar case presents for treatment. This time a diuretic is selected. What is the result? The kidneys are overtaxed, the abnormal systematic condition is diverted, but the patient runs the risk of an attack of inflammation of these important emunctories.

Another example may be furnished in a case of serious heart involvement. The cir-

culation is impeded, and the lower limbs and abdomen become enormously distended from the accumulation of water. For some reason aspiration or tapping may not be admissible, and yet the patient is in imperative need of relief. With this relief he may have his life prolonged, possibly a month or two, or it may be for several years. In this case neither homoeopathy nor antipathy give promise of relief, and at such a juncture it is worse than useless to waste time experimenting with either of these principles. It is clearly a case in which the chief eliminators of the water of the body must be pressed into active service, and the diuretic to which any physician of common sense will resort reduces the hydrops allopathically. It is true that the kidneys may have been eliminating too little—because of the pressure of the accumulated fluid—and that the action of the drug upon them is in accord with antipathy, but the removal of the dropsical swelling is illustrative of the allopathic method. Such cases place one in position to make choice of evils, and

under the circumstances allopathy is preferable to the death of the patient.

A mustard plaster, or a hot hop-bag applied to the chest in cases of congestion or inflammation of the bronchi or lungs, furnish further illustrations of this method of derivation, and may be laid under contribution by any physician of common sense, regardless of whether he believe in homoeopathy or not.

With the exception of such illustrations as are above given, the allopathic method is to be avoided as not only unreliable, but as in some cases positively harmful. Allopathy is, therefore, not a therapeutic method of wide usefulness; its field of application is limited, but when the exigencies of the case, "the greatest good to the patient," demand its application it is censurable to refuse to resort to such measures.

CHAPTER IV.

Therapeutic Methods: Antipathy, the Law of Dissimilars.

That those who read may have a clear idea of the meaning of the term antipathy, reference has been made to some of our lexicographers, with the following result:—

Antipathy:

“Any opposite properties in matter; also aversion to particular objects; a natural opposition to anything.”—*Thomas*.

“Aversion; repugnance; any opposite property or affection in matter.”—*Keating*.

“Aversion, opposition to.”—*Billings*.

“That system of therapeutics which consists in employing medicines that produce effects of an opposite nature to that of the symptoms of the disease, according to the doctrine *contraria contrariis opponenda*, founded by Hippocrates.”—*Foster*.

Our last quoted authority has confused the name of Galen with that of Hippocrates, for, as Rutherford Russell in his "History and Heroes of Medicine," tells us, "Hippocrates is opposed to the dogma *contraria contrariis*," while on a subsequent page of the same work we find him stating that "This is the famous principle of Galen—*contraria contrariis curantur*—held in reverence among us to the present day."

Galen's *contraria contrariis curantur*, therefore, embodies the idea of the principle of antipathy. The principle was not discovered by any one, of course, Galen was simply its verbal formulator; it is as old as man, and was undoubtedly applied by our primeval progenitors, but not at first in its relation to therapeutics. Being a fundamental law of hygiene and of physiology, it was illustrated in the first food taken to relieve hunger, the first heat or clothing applied to relieve cold, the first rest taken to repair the ravages of exertion.

While antipathy is a hygienic principle, it has also an important sphere of usefulness in therapeutics. Russell gives Galen's

crude definition, as follows: "Given a disease, determine its character as hot or cold, moist or dry, by an effort of imagination; having done so select a remedy which has been catalogued as possessing opposite qualities."

The following may be submitted as a broader and more modern explanation of this principle:

When an abnormal condition exists and a drug (which will produce in the healthy a condition in character opposite such an abnormal state), is given to compel the organism to assume a state opposite that existing, antipathy is the principle applied. Hence, palliatives are antipathic agents, because the effect of a palliative is to put the organ or tissue, or the whole organism, into a condition exactly opposite that which exists at the time the palliative is given. Anodynes, cathartics, astringents, soporifics, etc., are all applicable upon the principle of antipathy.

For many years it was the habit of homoeopathic practitioners to condemn unqualifiedly the use of palliatives; but as secta-

rian prejudices have been eclipsed by the broader charity of science, and as common sense has shown the necessity of prompt and efficient action in a certain class of cases which do not come within the pale of homoeopathy, the practitioner—whatever his pathy—has remembered that he is first a *physician*, and not only has the right but by force of duty he must use the surest means for the relief of his patient, which means may sometimes be found among the palliatives. In fact he should so qualify himself that he knows just as well when not to attempt the application of homoeopathy, as when to apply it. He should know beyond peradventure, that in a case where a palliative is really indicated homoeopathy will be of no avail.

Palliatives may be indicated when the patient needs prompt relief from some mechanical trouble, or in cases of incurable disease where the patient must have temporary relief from time to time. At such a juncture the palliative may be used for “the greatest good to the patient.” As Dr. Dake says, in his “Therapeutic Methods”: “When

it is important to deaden sensibility during the existence of affections not susceptible of cure, and affections self-limited, or to hold in check destructive processes not at once amendable to curative treatment, or to stimulate flagging energies directly which cannot otherwise be made to respond, anti-pathic measures may be of great importance."

A condition for the proper use of a palliative is kidney colic, or gall stone colic. The trouble is here mechanical, the pain is excruciating, and should be relieved as soon as possible. An anodyne, morphine for example, may be legitimately used even by a rigid practitioner of homoeopathy; or some agent that will cause a relaxation of the tube through which the stone is attempting to pass may be prescribed, as gelsemium or belladonna, in full physiological doses. In the case of the use of morphine the anti-pathic principle is illustrated, excessive sensibility being changed to absence of sensibility; in the use of belladonna or gelsemium, a simple dilatation of the tube is caused, which is opposite to no existing

condition, nor is it similar to any existing condition, and therefore no therapeutic law is applied, a mechanical result of drug action simply relieves a mechanical condition of obstruction. The aid of homoeopathy may later be invoked to relieve after effects, and to prevent the formation of future obstructional accumulations.

The use of capsicum in debility of the gastric mucous membrane, is another illustration of the law of dissimilars, and its use in general debility due to loss of recuperative power, illustrates the same principle. So far as I can find, there is no evidence to show a depressing effect, or relaxation, or want of reaction, as a primary effect of capsicum in any sized dose whatever. Why then may not capsicum act antipathically to debility, even when given in infinitesimal doses?

We say capsicum is homoeopathic to certain kinds of sore throat, because there is evidence of greater or less value to show that it will produce a similar sore throat in the healthy, which sore throat is among the primary conditions due to physiologi-

cal doses of the drug, and is consistent with its irritative action in general; but debility we do not find as a primary effect of *capsicum annuum*. Consequently, whatever good may result when this drug is prescribed in debilitated states of the system, and in local relaxation of tissue, is not due to the relationship of similars, but probably to the law of dissimilars.

But is the law of dissimilars capable of no broader application than the foregoing would suggest?

It has been claimed that *all* real cures are in accordance with the law of similars. This can only be demonstrated by accepting all drug effects, both primary and secondary, as of equal and interchangeable importance, and by juggling these effects to always discover in one class or the other the similitum of the condition for which the particular drug is prescribed. Accepting the view, however, that primary effects of drugs are the real evidences of drug influence, it becomes obvious that the law of similars does not explain all curative effects of drugs.

Why should the assumption that the law of dissimilars has no application in the field of dynamic medicine, have received such credence? What proof is there of such an assumption?

In common with others, I have, in the past, taught that antipathy is the principle of palliation solely, and that when cures result from its application, for other purposes than temporary palliation, they are due to the *vis medicatrix naturae* of the patient and not to the drug influence. I am, however, by no means convinced that this teaching was entirely correct, for I am now impressed with the view that even the clearest and most perfect homoeopathic cures depend upon the same *vis medicatrix naturae*, for if there were not enough recuperative power of the organism to resist the homoeopathic remedy, then the patient could not even recover through the law of similars. The drug whose pathogenesis is similar to the disease condition of the patient, appeals to the organism because of and through the elective sensibility which the diseased organism has for the drug, and in the extra effort

to act in a line relatively parallel with the line of existing morbid conditions, recovery ensues in some way that has never yet been explained.

Now, in the case of the application of the law of dissimilars, are the conditions so very different?

A drug is prescribed whose pathogenesis shows it to have caused effects opposite, dissimilar, or more or less contrary to those evidences of disease for which it is given. If it be given in massive doses the organism makes a profound effort in an opposite direction to the existing morbid process. This is reasonably certain to be followed by a reaction—a cessation of action—which allows the organism to drift back into its old morbid lines, and the disease state is no better than before, possibly worse. But suppose an infinitesimal amount of the antipathic drug be given, just enough to start the force of the organism to act in opposition to the morbid condition and tendency; this one stimulus may be all that the force of the organism needs to start the process of resolution, and from this may not only result

temporary improvement, but through the mysterious *vis medicatrix naturæ* a permanent cure may follow.

To illustrate the probability of this hypothesis, attention may be called to the use of capsicum in debility and general relaxation. Primarily, as already stated, the drug does not produce a pathogenetic debility, but it does produce hyperstimulation. Debility may, however, follow as a secondary result, due to the over-taxed, over-stimulated organism. When, therefore, the drug is used therapeutically the organism is aroused in accordance with the law of dissimilars.

Undoubtedly these views will meet with the disapprobation of some, because they conflict with the teachings of Hahnemann on the subject of antipathy; but since the *Organon* was penned the evolution of thought has carried many conclusions far beyond the definitions of those old days. To quote from Hering's 3rd American edition of the *Organon*, Sec. 57, p. 125:

“An ordinary physician who proceeds upon the antipathic method, pays attention to one symptom only—that of which the patient com-

plains loudest, and neglects all others, however numerous. He prescribes against this symptom a medicine that is known to produce the very opposite effect; for, according to the axiom *contraria contrariis*, laid down fifteen hundred years ago by the old schools of medicine, it is from this remedy that he expects the most speedy relief (palliative). Accordingly, he administers strong doses of opium in pains of every description, because this substance rapidly benumbs the feeling. He prescribes the same drug in diarrhœa, because in a short time it stops the peristaltic movement of the intestinal canal, and renders it insensible. He administers it likewise in cases of insomnolence, because it produces a state of hebetude and stupor. He employs purgatives when the patient has for a long time been tormented with constipation. He plunges a hand that has been burned into cold water, because its icy quality appears suddenly to remove the pain as if by enchantment. When a patient complains of a sense of cold and loss of vital heat, he places him in a warm bath, whereat heat is immediately restored. Any one complaining of habitual weakness is advised to take wine, which immediately re-animates and appears to refresh him. Some other antipathics—that is to say, medicines opposed to the symptoms—

are likewise employed; but independent of those I have just enumerated, there are not many, because ordinary physicians are only acquainted with the peculiar and primitive effects of a very small number of medicines."

In Hahnemann's time the possible application of antipathy had not been considered beyond the crude and forcible suppression of "one symptom." But we find antipathy far broader in its application, its possibilities are beyond anything apparently "dreamt of" in Hahnemann's philosophy—and why not? Has not all science and all art made great strides since the beginning of the nineteenth century?

What is there in the human organism to prevent two drugs acting so dissimilarly as to be relatively opposite even in minor details? (We know there are such drugs.) And if one of these drugs is homoeopathic, or similar, in its effects to a given morbid condition, may not the other be relatively as opposite or dissimilar to the same morbid condition?

It must be remembered that homoeopathy is a relationship of degree, different drugs

being more or less homoeopathic to the same condition. This being a fact why may not antipathy be likewise a relationship of degree, several different drugs being more or less opposite in degree of antipathy, or contrary to, the pathological condition for which they may be prescribed?

As will be seen later on, perfect similarity is debatable, so, perfect dissimilarity or contrariety may also be debatable; and if this be true then there is no reason why drugs may not be prescribed whose pathogenetic effects bear different degrees of contrariety to the morbid condition to be relieved. It, therefore, becomes obvious that the idea of prescribing for the "single symptom" only, fails to cover the possible scope of the law of dissimilars.

I am at a loss to understand why such an exceptionally deep thinker as Hahnemann did not see the possibility of an antipathic relationship based upon not "one symptom only," but upon the whole condition including all symptomatic details; why he did not recognize at least the *theoretical* possibility

of an antipathic "totality" of symptoms, as well as a homoeopathic "totality."

The "Injurious consequences of some antipathic cures," to which Hahnemann refers in p. 59 of the edition of the *Organon* from which a former quotation was made, are certainly in point, but his acceptance of the then universally accepted idea that *drugs act*, vitiates his argument. But although all that is said in this section be accepted as correct, yet the possibilities of the law of dissimilars are not covered.

Hahnemann could see nothing but harmful results from the application of antipathy, and the reason for this is doubtless because he failed to recognize the power of the *vis medicatrix naturæ*, and its remarkable adaptability. It is a fact, if the experience of trained observers is to be trusted, that an antipathic agent may be administered to a strong organism without harmful results, e. g., when a patient is suffering from kidney colic morphia will deaden sensibility while the stone passes, and the patient will recover without the establishment of the opium habit or other bad results. It

is true we have here a single condition, "one symptom only," pain, to be relieved by the antipathic agent, but what of that? The point here is that nothing but good results from the application of the law of dissimilars in such a case.

In illustration of prescribing a drug antipathically upon more than "one symptom only," I will quote a case from practice:

A gentleman, who for many years has been afflicted with loco-motor ataxia, has at intervals paroxysms expressed in the following manner: Intense headache, deadly nausea unrelieved by frequent vomiting, acute, lightning-like pains in various parts of the body, chiefly affecting the lower limbs, and at intervals violent clonic convulsions. These paroxysms have occurred at intervals of from one week to several months, with greater or less intensity, during a period of not less than twenty-five years. The disease has progressed to complete paralysis of the lower limbs. Years ago the armamentarium of drugs with which the homoeopathic practitioner is familiar was exhausted, but without relief, as a matter of course. Morphia

is the drug from which relief is now always secured, and certainly no one can lay claim to this palliation resulting in accordance with the law of similars. The conditions calling for amelioration, are, headache, nausea and vomiting, pains, and convulsions; and the drug produces its effect by deadening the sensibility of the nervous system, thus relieving a condition of hypersensitiveness which gives expression to its existence in at least four different kinds of manifestations. Here, surely, the law of dissimilars is demonstrated not by palliation of "one symptom," but by palliating a whole group which is in detail and as a whole dissimilar to the primary effects of a full anodyne dose of morphine. And further, it may be claimed without fear of refutation, that the practitioner of homoeopathy not infrequently bases his supposable homoeopathic prescriptions upon a smaller number of "indications" than are furnished by the above described case for the prescription of an antipathic remedy. The "totality" of symptoms being quite as closely approximated in one case as in the other.

Whatever be the teachings of our predecessors, and of some of the text-books of the day, condemnatory of antipathy, I must contend that it is a principle which has its place in therapeutics, and can be applied with perfect propriety and consistency by the believer in the law of similars. In fact he cannot practice medicine as a well-equipped and liberal physician without the aid of this principle.

The believer in the law of similars should, above all others, believe in all other forms of law, should endeavor to apply homoeopathy only where it is applicable and should not commit such an anachronism as an attempt to drag it out of its sphere, and thus render himself and his school ridiculous in an effort to prove an impossibility.

CHAPTER V.

Therapeutic Methods: Antipathy, the Law of Dissimilars; Homœopathy, the Law of Similar—Isopathy—*The Vis Medicatrix Naturæ.*

It is a truism, that homoeopathy is only applicable after the cause of the morbid condition of the patient has been removed. We know more of results than we do of how results are produced. It is so of all the processes of nature. In the case of the law of similars many theories have been offered in explanation, but theories are not proofs; though a sound working hypothesis is a wonderful help in elucidating a subject, and fixing otherwise elusive truths. In fact, a plausible hypothesis, in the absence of a series of demonstrable facts, is an absolute necessity in constructing a system, a method, or a plan of philosophy.

The hypothetical explanation of how homoeopathic results are brought about, which appeals to me most strongly, may be

stated as follows: It is a known fact that two similar diseases do not appear in the same organism at the same time. It is legitimate, therefore, to assume that as they do not appear even under favorable circumstances, they cannot appear synchronously. (Scarlatina and measles may be cited as examples.) If, now, it be true that no two similar pathological conditions can exist together, it is reasonable to suppose that no two similar drug diseases can exist together. If this be true, then it is also reasonable to assume that a natural disease closely resembling a given drug pathogenetic condition cannot continue in one individual after the pathogenetic drug disease is inaugurated; therefore, when a drug which is capable of producing a certain abnormal condition in the healthy human organism, is given a patient suffering from similar disease symptoms, if the drug influence is sufficiently powerful the pathological condition will be modified, or possibly subside altogether.

In order to produce a strong impression upon the diseased organism, it must be re-

membered that it is not necessary to give as much of the drug as is required to produce a decided effect upon the healthy organism; because of the fact that a diseased organism is more sensitive to impressions than is the normal organism. Especially is this true of agents that act upon the same organs and tissues which are involved in the disturbance, and which cause the organism to exert itself in the same pathological direction. It is because of this fact that it is not necessary to give massive doses of drugs when they are homoeopathically indicated; and it is because of this fact that drug subdivision has been carried to such extremes by some over-zealous advocates of the law of similars, whose enthusiasm has carried them, apparently, to the point of believing there is no limit to the divisibility of matter.

All things are either definitely similar or definitely dissimilar, and all similar things have certain individual differences, just as all dissimilar things have certain resemblances. It is therefore difficult to consider the two therapeutic laws independently.

Similarity and dissimilarity exist in different degrees, ranging from the widest unlikeness to the closest resemblance. As the greatest possible dissimilarity depends upon the greatest and most fully developed individuality, so the closest possible similarity is to be found existing between two of the simplest fundamental forms of matter, e. g., the ions of a chemically dissociated molecule. No relationship is thinkable between two conditions or things which does not involve one or the other of these comparisons. As Th. Ribot says: "To infer a relation, is to think that it is similar or dissimilar in certain other relations."

The foregoing facts bear strongly upon the isopathic hypothesis. Things bearing the closest possible similarity or resemblance to each other, are still unlike in some particulars. They have two separate existences, two separate individualities; they may be apparently identical, but in point of fact they are not. To be identical they must not only bear a complete resemblance, but they must bear the same relation to the same environment. This, however, is impossible,

because two bodies cannot occupy the same space at the same moment of time. Hence, it may be safely asserted that the relation upon which isopathy is supposed to be founded is not that of identity, but of similarity, and that, consequently, there is no such thing as isopathy. If, therefore, there are curative results due to the application of the alleged isopathic relationship, such results are, in point of fact, in accordance with the law of similars, or they are due to some entirely different cause and not to the falsely termed isopathic relationship.

The dissimilarity, which is fatal to identity, to isopathy, paradoxical as it may seem, becomes the similarity upon which homoeopathy is based. Homoeopathy depends equally upon the dissimilarity and the similarity of two conditions or things. When two things or conditions bear so close a resemblance as to confuse their identity, they are said to be *very* similar; and yet the very fact of the impossibility of identity of two comparable individuals, proves their dissimilarity. The resemblance between two comparable individuals is, consequent-

ly, a similarity of *degree* only; the likeness is merely relative.

Two comparable individuals bear sufficient resemblance to be called similar, until the degree of likeness becomes so slight that they are obviously dissimilar. Dissimilarity is thus also dependent upon degree of likeness and of unlikeness.

As mentioned, even strikingly similar objects are more or less dissimilar, and this dissimilarity becomes more and more marked until the dissimilar objects apparently possess precisely opposite qualities and conditions. But qualities and conditions, it must be remembered are, of necessity, positive attributes, and as no material thing can exist that lacks *all* the qualities and conditions of another, complete dissimilarity is impossible. It thus becomes evident that there is no such thing or condition as complete similarity, nor is there such a thing or condition as complete dissimilarity.

Were there but one degree of similarity, the problem of drug pathogenetic resemblance to disease conditions could easily be solved; but it is just the degree and shades

of degree of similarity that make the labyrinthine mystery of the great problem of homoeopathy.

Obviously, homoeopathy must be regarded as a relationship of degree, in fact of many degrees; the degree of its successful application depending entirely upon the degree of similarity existing between the condition of the patient and the pathogenesis of the drug prescribed. How to obtain expertness in making successful prescriptions in accordance with the law of similars, depends upon the amount of knowledge of disease, and of drug pathogenesis possessed by the therapist.

From the foregoing it may be concluded that there are definitely two therapeutic laws; the law of similars and the law of dissimilars. For certainly, if there is a law of similars there is a law of dissimilars; or, if there is no law of dissimilars, then there is no law of similars.

No doubt objection will be raised to this advocacy of two therapeutic laws—which may by some be regarded as rank heresy calculated to pervert those who are striving to

be good homoeopaths—but this is not the intention of this analysis. The intention is simply to state what is truth. The interpretation may be wrong, but it is the best the interpreter can do.

Having, it may be assumed, satisfactorily shown that there is no isopathic relationship, how can the cases usually cited as illustrations of isopathy be explained?

The most familiar example, probably, cited in illustration of the isopathic theory, is the restoration of a frozen foot, hand, or nose, by friction of the part with snow. This may be explained by the mechanical friction which generates just enough heat to begin the relaxation of the cold and contracted capillaries, thus favoring the restoration of the normal circulation. By continued friction the temperature is gradually raised, and by slowly continuing the application of frictional heat the parts are finally restored without injury. Inversely as the part lost heat, so was the heat restored. Cold caused the morbid state, but it was not cold which removed it; it was the application of heat, and therefore isopathy no more explains the

restoration than does homoeopathy. The law of dissimilars, antipathy, may be credited with the salvation of the part.

The restoration of over-taxed muscles by gentler exercise than that which produced the soreness, though possibly dependent upon the relationship of similarity, certainly does not depend upon isopathy; for the gentler, curative exercise is similar but not identical.

Says Dr. Dake in his "Therapeutic Methods": "There is a kind of isopathic practice, favored by some, who believe that a higher attenuation of a drug, its finer particles, may antidote the crude article or its lower attenuations, in the human system. Such persons have forgotten, if they ever knew the fact, that no attenuation of a drug is made up of particles of a uniform size—that in a two-grain dose of the third trituration of arsenicum, for example, there are particles as coarse as found in the first, and some as fine as any in the sixth. If then it be true that doses of the sixth may antidote or remove the effect of the third or first, the pharmacology and posology, upon which the practitioner must depend, would present insuperable obstacles to his practical success in the

sick room, as each dose administered must supply its own antidote."

Again, it becomes obvious that the relationship existing between smallpox, tuberculosis, syphilis, etc., and any beneficial results that may come from the use of the virus of these diseases, in treating patients suffering from such conditions, is not that of isopathy, but depends upon the law of similars. To sustain the isopathic theory, the product of the disease must cure the same patient from whom it is taken, and this we know does not occur.

The anti-toxins are sometimes cited as a means of demonstrating isopathy, but their action bears no relation to this hypothesis. On the subject of the origin of these agents the following quotation from Hares' "Practical Therapeutics," is in point:

"Before we study this method of treatment, let us understand the basis upon which it rests. It being universally admitted that the bacillus of diphtheria, by its local growth, produces toxins which, when carried in the blood or lymphatics, destroy the functional and organic life of the vital tissues, it is at once evident

that in the body of the patient there must be two processes looking towards its own protection. The first is the effort at elimination on the part of the emunctories; the second is a hypothetical process—namely, that the tissues and liquids of the body contain, or at once manufacture, an antitoxin, the effects of which are directly antagonistic to the toxin of the disease. Although vital resistance consists in far more than this simple and single method of defence, it suffices at present to discuss only this part of it. If the tissues can form enough antitoxin to protect the organism, the patient recovers; if they fail, either because they are feeble or because the dose of the toxin is overwhelming, the patient dies.”

If this be the correct explanation of the principle of action of the anti-toxins, then, certainly isopathy cannot be credited with whatever result may follow their administration. It would seem that no therapeutic principle is here involved, as the curative results are due to the action of one substance upon another within the boundaries of the human organism, but not upon the organism itself.

It has, however, been suggested that possibly diphtheria anti-toxin does act homoeopathy, after all. The following report of a case published in the *Boston Medical and Surgical Journal*, February 17, 1898, is probably the best evidence that can be offered in support of this view:

“Healthy man was injected with five cubic centimeters of diphtheria antitoxin for prophylactic purposes. Five days later he suffered from malaise, chilliness and vertigo. He was faint and was put to bed. Chilliness and vertigo continued; vomiting occurred. There was great prostration and oedema of the uvula and pharynx. Urine thick, high-colored, and almost complete suppression. Pulse rapid and irregular. At the end of the first day general glandular enlargement, which persisted ten days. Patient much prostrated and lost ten pounds in weight. Unable to resume work for a week.”

Concerning this case the question arises, whether the symptoms experienced by the subject may not have been due to diphtheritic virus, and not to the antitoxin. This view of the case is suggested from the fact that the antitoxin was given for “prophylactic

purposes," and one is naturally led to suppose that the subject must have been at least *suspected* of exposure to diphtheria, or the prophylactic measure would not have been adopted. It is quite possible that the diphtheria bacilli might have first shown signs of their work even as late as five days after exposure. But granting that the results reported were really due to antitoxin, the most that can be said is that the case is suggestive. Further experiments are needed in this field before it can be admitted that diphtheria antitoxin will *produce* diphtheria, or even a condition favorable to the development of the disease, and until this is demonstrated beyond peradventure its therapeutic relationship to diphtheria can no more be considered homoeopathic than antipathic.

In the case of cultured snake virus as an antidote to the bite of a venomous snake, the same argument holds good if an antitoxin is developed in the process of cultivation. If, however, the curative effect is due to simple dilution of the venom, then the result illustrates the law of similars and not

the isopathic hypothesis. As stated elsewhere:* “A man is bitten by a cobra and is about to die; the isopathic remedy would be, nay, must be, a second bite by the *same* cobra. Change the character of the venom used to remove the effects produced in the first instance by the venom, in the slightest degree, and isopathy is no longer the principle under application, the remedy becomes *similar*, not *the same*.”

From the foregoing it becomes evident that an isopathic relationship between pathogenic drug effects and disease effects, never existed, and never can exist; both theory and facts show that there is no such thing as an isopathic relationship.

It is argued by some thinkers that homoeopathy is not applicable to organic diseases, but that it is curative only when there is functional derangement. Because of the difficulty in establishing a distinct line of division at the termination of simple perversion of physiology of an organ or tissue, and the initiation of definite morphological

*North American Journal of Homœopathy, Oct., 1897, p. 601.

change, it is not easy to maintain this position.

All modifications which drugs are capable of causing in the organism, and which may be demonstrated to be primary effects, may be utilized for therapeutic purposes, whether such effects are mere evidences of perversion of physiology, or are due to organic change; and such knowledge of drug pathogenesis may be applied in accordance with either the law of dissimilars or the law of similars. That cures have resulted from the application of drugs, when organs and tissues have not only manifested evidences of mere functional derangement, but when the parts have been organically changed, is a fact that will be corroborated by the medical profession; and if these cures have at any time not resulted in accordance with the law of similars, then they have been due to the law of dissimilars; always excepting the influence of hypnotic suggestion.

I do not believe the most ardent advocate of the restriction of the application of the law of similars to the treatment of functional diseases, will for one moment agree

to adopt such a conclusion, and yet, unless the view is accepted that homoeopathy is applicable not only to functional derangements but also to organic conditions, there is no alternative. It is in the field of chronic diseases that so much has been claimed for homoeopathy, and certainly such conditions are not restricted to mere perversion of function.

THE VIS MEDICATRIX NATURÆ.

Sooner or later the fact must be generally recognized among medical men, that in many instances wherein discomfort from a disease condition can be abated for a period sufficiently long for the organism to forget the habit of suffering, the condition will be found to have been removed by the *vis medicatrix naturæ*, when the influence of the palliative is expended.

The existence of such a recuperative power of the organism has been disputed by some, and by others it has been regarded as that which becomes diseased, that from which is derived all pathology. That a *vis medicatrix naturæ* does exist there can be

no doubt. Stahl recognized it as the *anima* of the organism, Hoffman called it "nervous influence," Van Helmont dignified it as "Archaeus," Galen christened it "animal spirits," and Hippocrates called it "nature." Were there no such force inherent in the organism it would not be possible for spontaneous cures to occur, and the human body would fall an easy prey to any kind of noxious influence, material or immaterial, with which it might come into contact. This force is simply the indescribable power which exists in every vital organized entity, by which the health of the organism is maintained, and by which the normal equilibrium is restored when the organism is deranged.

This power may be more feeble in some organisms than in others, but it is not subject to disease. It is the organs and tissues of the human organism that may become diseased, and the only way in which the health of these organs and tissues can be restored is by stimulating the recuperative power of the organism, the *vis medicatrix naturæ*, to supply the diseased parts of the

organism, (or the whole organism, if the derangement involve so much), with increased vitality, with life, whatever that may be.

This power is continuously at work in the organism, repairing waste, repelling noxious influences, neutralizing harmful possibilities, and in fine, maintaining the normal health. There come times, however, when there is interference in the supply of this natural medicinal force, or for some reason it does not prevent the inroads of deleterious, or disease influences. It is here the physician is called upon to interpose, and the only way in which he can restore the normal equilibrium is by removing the obstacles to health, and calling upon this recuperative vitality.

This may be attempted in two different ways; first, by bringing to bear upon the patient immaterial influences, and second, by the use of material agents.

Immaterial means are those which can not be measured by material standards, as electricity, or which appeal directly to the mind of the patient; material means are substances commonly known as drugs, and mechanical agents.

The first class of influences include all kinds of superstitions and irrational beliefs, beginning with prehistoric fetichism and ending in christian science; and not one of all the causes for exciting the credulity of the subject but has produced undeniable cures of serious conditions.

Pettigrew in his "Medical Superstitions," says: "The credulity of mankind has never been more strongly displayed than in the general belief afforded to the authenticity of remarkable cures of diseases said to have been affected by the imposition of royal hands. The practice seems to have originated in an opinion that there is something sacred or divine attaching either to the sovereign or his functions. The testimonies offered by writers on this subject, and the number of witnesses recorded, are too great and too indisputable to need reference. No one appears to have questioned the validity of the means, and no one has attempted to explain the results obtained, but in connection with the sanctity of the operator."*

*For a study of subjective influences, see "The mind Cure, or the Mental Method of Healing," N. Y. Med. Times, April and May, 1886.

This was written in 1844, and since then the many experiments in the field of practical psychology have thrown much light upon this class of problems of credulity, and we find that hypnotism is the key which unlocks all these mysteries of the past, and also of the present.

Whether it be through the cerebro-spinal nervous system, or through the sympathetic nervous system, hypnotism must appeal to the recuperative power of the organism for its curative therapeutic results. We are, therefore, brought back to the starting point, and find that this *vis medicatrix naturæ* is the paramount factor in all hypnotic cures.

Relative to the material means for curing the sick, I think it will become obvious that the appeal must also be addressed to this same natural recuperative force of the organism if the physician wishes his drugs to be instrumental in the cure of the patient. Nor does it matter which of the laws are laid under contribution, the curative results must ultimately be caused by the same power.

To illustrate how the principle of similars calls upon the *vis medicatrix naturæ*, a case suffering from simple bronchial congestion may be cited. The condition of the patient calls for a drug which causes the organism to endeavor to dispose of it in some manner, and, we will assume, as it has been previously shown by experiments upon the healthy, that the organism, in its effort to dispose of this particular drug, acts in a manner similar to the way in which organisms act when laboring under acute bronchial congestion, so the organism of the patient in question, in its effort to dispose of this particular drug, not only succeeds by the strength of its normal recuperative power in overcoming the influence of the drug, but at the same time overcomes the similarly acting influence for which the drug has been given; and when the effort to dispose of the drug has culminated in success, the patient is well of his bronchial malady. The drug appealed to the *vis medicatrix naturæ*, and in the effort to respond the patient was cured.

To illustrate the appeal made to the same power when the principle of dissimilars is applied, the following hypothetical case may be cited: A modern degree of constipation exists; cascara is given. As a result, the peristaltic muscles are slightly stimulated, the normal recuperative power of the organism endeavoring to dispose of the drug, and in its endeavor the constipation is relieved. Whether or not this relief is more than temporary depends somewhat upon the normal strength of this recuperative power of the given organism. If this is good there may be no evidence of secondary weariness, relaxation, rest, and the intestinal function may continue in a normal manner; but if the recuperative force is not strong, then the probability is that there will be but temporary relief from the drug, and a decided evidence of weakness of the recuperative force will be shown in a return to the constipated condition.

From the foregoing I believe it is evident that whether the patient be cured through the intervention of immaterial means, or through material means, the ultimate power

upon which the cure must depend is the *vis medicatrix naturæ*, the anima of the organism, the nervous influence, the archaeus, animal spirits, nature, the normal recuperative power of the organism. If this is not true, then upon what power does the cure of the patient depend?

Aside from the cures due to credulous expectancy, which will sometimes result from the application of any agent or any principle of therapeutics (as already suggested), in its proper sphere homoeopathy may be credited with many remarkable cures. In this all men who have made a careful and thoughtful study of the subject, and who have applied this law to the best of their ability, will agree. There are times, of course, when the human organism is past all possibility of curative response, and when nothing more permanent than temporary palliation can be secured, but no reasonable mind will think of charging failures under such circumstances to the failure of the law; it is the means for demonstrating the law that have failed, and not the law.

Theoretical and practical homoeopathy may not be the same thing, because of the variability of the means and conditions necessary for demonstrating the law, but it is certain that he who is thoroughly conversant with the science should be better qualified to practice the art, than he who has failed to grasp both the limitations and the possibilities of the law of similars.

CHAPTER VI.

Some Questions That Have Arisen Because of the Formulation of a Law of Similars: Sub-Division of Matter; Drug Dilution; Dynamization.

Because of the fact that drugs administered in disease in accordance with the law of similars, require a smaller amount of drug substance to produce curative results, than when given according to the law of dissimilars, or for chemical, mechanical, or paraciticide purposes, it was assumed that equally small amounts would cause effects in the healthy human experimenter, or prover of drugs. In consequence, many experiments were made upon the comparatively healthy human being, with the very highest dilutions of drugs, and results were claimed to have been obtained. Of course the argument upon which such pathogenetic experiments were based was, that if drugs could cure the sick when highly diluted,

they could also produce effects upon the healthy when given in the same dilution.

The opportunity here presents to question whether these dilutions—what may be called the high dilutions—really do cure patients; but attention will simply be called to the fact that the therapeutic results derived from a given dilution are a matter of personal experience, that personal experience is frequently unreliable, and that when it is reliable it is of more value to him who has had the experience than it is to any one else. Furthermore, as we have seen, credulous expectancy has many good therapeutic results to its credit. But to return to the question of whether or not pathogenetic results may be expected from highly diluted drugs.

In obtaining effects from pathogenetic agents, the susceptibility of the experimenter to the drug under test is the chief factor. When in a state of perfect health—the vital force being in equilibrium—the human organism is in the best possible condition to resist influences of all kinds; and *per contra*, when this normal equilibrium

is disturbed the organism is not in the best condition to offer resistance to influences. It, therefore, follows that a patient under treatment for the cure of a morbid condition, with his power of resistance necessarily weakened, more readily yields to drug influence than the individual in normal health, the typical drug prover. Hence, granting that very high dilutions may, or do, act upon the sick, it does not follow that these same dilutions will act upon the healthy.

Many records of pathogenetic effects of the 30th dilution of drugs, and even of other higher dilutions, have been published, but because of the absence of a record of the preliminary health condition of the experimenters, (if for no other reason), these experiments should not be accepted as proof of the pathogenetic efficiency of such preparations. This point will be again considered in treating of dynamization.

FLUXION DILUTIONS.

Fluxion dilutions of drugs are preparations which were produced formerly—and

I regret to say, to a certain extent even at the present time—by various ingeniously contrived machines, by which water was allowed to run into and out of vessels which were so adjusted as to register each filling. At the beginning of the process a given amount of the drug to be diluted was placed in the vessel, and the calculation of the degree of dilution or “potency” was found recorded by the register at the end of the allotted time. As may readily be understood, these cup washings were not reliable preparations, because it was impossible to make a calculation of the amount of drug, if any, contained in the labelled degree of dilution. In some instances a certain amount of drug substance *might* possibly remain in the cup at the end of the process of dilution, but in others nothing whatever might remain but water. Furthermore, the force of the water in entering the vessel, which was used to assist in breaking up the substance to be diluted, while possibly sufficient in case of some substances, would be entirely inadequate in others. In some instances the fluxion process was started

with the crude substance, in other cases hand-made dilutions were used.

This aberration had its origin in what are known as the "bottle washings" of Jenichen. This fanatic, who did not die until 1849, undertook to deceive the medical world into thinking that powerfully succussed (shaken) dilutions, made by emptying alcohol into a dry bottle from which had evaporated a dilution of the drug to be further diluted, were far more potent than the usually accepted Hahnemannian dilutions. The same might have been said of the men who encouraged the advocates of fluxion dilutions, that was said by Dr. T. L. Bradford, in his "Pioneers of Homoeopathy," of Rentsch, Gross, Stapf and Hering, who made the mistake of offering Jenichen the greatest amount of encouragement. Dr. Bradford says: "Had they acted in the interest of science and of Homoeopathy they would have snubbed the poor lunatic from the first, thereby saving us from a shameful episode of credulity and nostrum-mongering, and perhaps prevented the melancholy self-sacrifice of a half-witted enthusiast, whose ante-

cedents* eminently disqualified him for the office of revolutionizing and upsetting Hahnemann's pharmaceutic processes."

By some enthusiastic high dilutionists the fluxion dilutions were confused with the legitimate, hand-made dilutions, and in an instance which can be authenticated the fantastically named one-hundred-millionth "potency" was credited as being a genuine Hahnemannian hand-made preparation.

To give an idea of how long it would take to make such a preparation by hand, the following calculation has been made: To make the one-millionth dilution, by hand, requires three hundred an forty-seven days, three hours, and to make the one-hundred-millionth dilution, by hand, the manipulator must devote ninety-five years, two months, two days and twelve hours to the task. This is at the rapid rate of three dilution a minute, working sixteen hours every day in the week, sleeping six and one-half hours, and allowing one and one-half hour a day for meals. Such a thing as a

*Jenichen was a horse trainer and veterinarian.

one-hundred-millionth *hand-made* dilution has, therefore, never been made.

DYNAMIZATION.

It is contended in these pages, that pathogenetic drug effects are best obtained from crude drugs, or at least from the lower dilutions. All obtainable evidence on the subject of toxicology, from the time of Socrates, supports this contention. It also seems to be a fact that moderately diluted drugs, while they do not produce as profound and fatal effects as crude substances, yet cause a greater variety of symptoms; though just where the limit of pathogenetic impotence exists it is not possible to say. It is quite probable, however, that it is futile to expect pathogenetic effects from drugs diluted beyond the 12th decimal degree. Possibly even more finely subdivided matter may cause symptoms in some subjects, but from the Milwaukee proving test, made within the present generation of active practitioners, (and from which no results were obtained), from the experiments of the provers of Thuringia, many years ago, whose

adopted rule was, "that, in order to obtain pathogenetic symptoms, only the 30th dilution should be employed for conducting provings on the healthy," (and from which society nothing has ever been reported), and from the painstaking efforts of the late Dr. T. F. Allen, to demonstrate "the presence of drug power in the 30th dilution," in which he had full faith until his experiments, resulting in his report at the American Institute of Homoeopathy meeting in 1885, that he had "failed at every point" to obtain symptomatic effects, besides the many fruitless experiments with high dilutions by other persons less well known, it is reasonable to assume that there is no pathogenetic possibility in the average experimenter for drugs diluted to the extent of the 30th degree of dilution.

It is a fact that there are abnormally sensitive individuals, who respond to influences too subtle to appeal to the average organism, and while we are occasionally brought into contact with such persons, yet our experiences in life generally, and drug pathogenetically, are drawn from average

human beings for the benefit of average human beings. It is very well to be able to prescribe successfully for an idiosyncratic, or for a hypersensitive condition which presents itself once or twice in a lifetime, but the knowledge most needed is average knowledge for the average ills of average people.

As a foundation for a knowledge of drug action we must know how drugs will effect the average human being, and experience has proved that the best way to obtain this knowledge is to experiment with appreciable doses of drugs. When we are sure of our foundation, then we will have ample time to experiment with drugs diluted to the most appalling altitude of human imagination, and from their effects we may spend all the time we wish in recording personal peculiarities and other rare phenomena; but until that time it would be wise to confine our studies within safe material limits.

The idea that by dilution and succussion drugs have developed within them a dynamis, a force which lies dormant in the

crude drug, is accountable for the belief that the high dilutions are better adapted for producing pathogenetic effects than the lower preparations. This belief is, of course, purely fanciful, but in its early days it laid strong hold upon many of the believers in homoeopathy. In illustration of the great power developed in drugs by dilution and succussion, the bursting of vials containing solutions, and the breaking of tumblers from the instillation of a few drops of the powerful liquid in as many ounces of water, have been cited; so great was the fierce energy of the potent dilution. And all sorts of even more remarkable things have been told regarding these wonderful agents—and the further back in the past the more marvellous were the occurrences.

In the early history of homoeopathy, dynamization, as the so-called “potentizing” of drugs was termed, was considered a mystery. The crude drug was regarded as an inert mass capable of disturbing the human organism to a greater or less extent in a crude way, and even capable of produc-

ing death by its overwhelming influence upon the vital force; but such effects were crude and unutilizable. The "dynamis" embodied in this crude mass was the active agent desired. Inert, while surrounded by the material drug body—which symbolized mortality—it quickened into power and vivifying energy by the talismanic touch of the succussing potentizer, and became an agent for incalculable good or evil. What this power was none could tell, and hence, it was called simply "dynamis;" and so all-searching and omniscient of human aches and pains was this force, and so infallibly did it always accomplish the mission on which it was started, that it is somewhat a matter of wonder why, instead of simple, plain "dynamis," this intelligent drug-soul was not dignified as "Psyche."

But since this day of witch craft, Perkins' Tractors, and other manifestations of the genus subjectivity, expert thinkers, especially those interested in the psychological development of homoeopathy, have concluded with the late Dr. George M. Beard, that the evidence of man's senses can

only be trusted when under control of his judgment, and that judgment a *trained* judgment. In this same line, investigations have shown that when a simple and reasonable explanation can be found for a phenomenon, its acceptance is indicative of a higher degree of intelligence than the acceptance of a less rational explanation. Therefore, since the fact has been shown that matter is capable of incalculable subdivision, neither the microscope nor any other means known being qualified to find the ultimate limit, and since the most subtle influences are known to affect man's organism, and further, since drugs are inert *per se*, and produce effects only through the action of the organism, we must in consequence, reject the theory known as "dynamization." The only "dynamis" there is in this problem is the vital force of the organism.

Furthermore, there is no proof that the molecules of which a drug is composed, are different in their pathogenetic effects from the crude substance from which they are derived—except possibly in degree. To re-

duce this proposition to its simplest form it may be said that ions are derived from atoms, atoms from molecules, and molecules from masses, and these are all but different forms of matter.

It may be considered as almost a work of supererrogation to cite illustrations of the extreme divisibility of matter, but we find indisputable proof of this fact around us in our daily life. For example, who can estimate the amount of ponderable matter in a cubic foot of air-impregnated rose perfume? Who can measure the amount of scarlatinal virus sufficient to initiate the disease? Or who can weigh the amount of musk given off from the time-honored grain so frequently quoted, in the long period of years its odor has saturated the surrounding atmosphere?*

*The radioactivity or *radium* furnishes another illustration of the astounding possibilities of material subdivision. In an article by Prof. Ernest Merritt, of Cornell University, published in the *Century Magazine* for January, 1904, the writer says; "Probably radium *does* lose weight. Most physicists are convinced that it does. But if it lasts for a thousand years, a lifetime will have elapsed before a measurable loss will have occurred. It is hard to form any conception of the extreme smallness of the particles emitted by radium. Their behavior shows that they must be smaller than

These infinitesimal influences are as already stated, subtile influences which may deleteriously affect the sick and idiosyncratic, but the average human organism is able to resist them, just as it successfully resists similar infinitesimal drug influences; but yet such minute subdivision of matter is a fact.*

All action and reaction are brought about by contact of surfaces, and drug action is no exception to this rule. The organism presents a surface or surfaces to which the irritating facets or surfaces of the drug are applied, and from the reaction thus caused pathogenetic results follow. If the drug used is but slightly subdivided,

the smallest atom. But Mme. Curie has found the atomic weight of radium to be 225, and the atom of radium is therefore one of the largest known. How is it possible for an element to produce particles smaller than its own atoms? There seems to be only one way out of this difficulty, and that is to assume that the atom itself is capable of subdivision."

*This fact of the unthinkably minute subdivision of matter does not conflict with the equally important fact, that the instruments of precision of science have not been able to demonstrate the existence of matter beyond the 30th decimal degree of subdivision. A conservative position, therefore, for the scientific believer in homœopathy is to confine his prescriptions within this demonstrable limit.

the number of facets are comparatively few, and the extent of the surface of the organism to which the drug surface is applied is limited; but if the drug is finely subdivided, its surface being increased, the surface of the tissues of the organism is covered to a greater extent by the drug. And further, in this subdivided condition the drug is better adapted for absorption, and for transmission throughout the organism, and hence, its contact with histological elements—the atoms or even the ions of the drug being brought into contact with the atoms or ions of the cells of the organism—is the more certainly assured.

When large doses of some drugs are given, their mechanical irritation of the digestive tract causes emesis and diarrhoea. The drug is in great part thus rejected, and its systematic effects are largely prevented, and if they do develop they are mixed with these crude local effects. In small doses, this local interference does not occur, and hence, general systematic effects alone are manifested.

From these facts it becomes obvious why subdivided and moderately diluted drugs should produce a greater variety of effects than crude, undiluted drugs. As heretofore stated, however, this process of dilution may be carried beyond the divisibility of matter, though the *exact* degree at which this occurs has not yet been found.

From the drug pathogenetic standpoint the experimenter has to deal principally with the average human organism, and can only take into account the rarer manifestations of the effects when a great number of experimenters are engaged in the given test. At the bedside, however, the physician is occasionally confronted by hyperisensitive organisms, and consequently very highly diluted drugs will sometimes produce the desired curative results. When these sensitives are discovered it is generally wise to begin treatment with such preparations, running down the gamut of dilutions until the proper degree is found. In treating such cases the physician finds the most troublesome of problems staring him in the face; usually the "personal equation" in

its most self-centered form. He cannot, therefore, always depend upon the statements of his patient, especially concerning subjective manifestations, for many times the supposed condition is but a myth, and is dispelled through a psychological process and not as a result of drug reaction. Hence, the reports of cases alleged to have been cured with very "high potencies," are always to be taken *cum grano salis*. There may have been nothing to cure. All things being equal, however, it is wise to use the moderately diluted drugs, i. e., from the twelfth decimal dilution down to the crude drug in standard physiological dose.

I do not wish to be understood as saying that cures are not made with dilutions above the twelfth decimal. I have seen what I have no reason for doubting to be genuine results from the higher dilutions, but I do mean that the greatest number of cures in homoeopathic practice, have been obtained from the middle and low range of dilutions, and such preparations are most satisfactory for general use.

In prescribing homoeopathically no invariable rule can be laid down for the dilution to be used—in our present state of ignorance—yet common experience seems to suggest that in acute diseases the lower preparations are usually most effective, and in chronic conditions the higher dilutions.

The frequency or repetition of dose, like the use of the particular dilution, is a question to be settled by individual experience. When the physician has obtained a practical working knowledge of therapeutics and pathology his judgment must decide the question of size and frequency of dosage.

In prescribing drugs, it has been suggested that care be taken in not giving certain drugs immediately following others, because of certain relationships supposed to exist between drugs, and the establishment of which relationship is supposed to prevent satisfactory therapeutic results or to be positively detrimental to the patient. This subject will be considered in the next chapter.

CHAPTER VII.

Drug Relationships—Drug Aggravation—Alternation of Drugs—A Sequence of Pathogenetic Drug Symptoms.

A drug relationship may be expressed as follows: When drug "A" has caused the organism to offer certain manifestations of activity, drug "B" will cause the organism to offer certain other manifestations of activity, and the bearing these two sets of manifestations have upon each other constitutes the relationship existing between the drugs "A" and "B."

The different drug relationships are said to be four in number:

Complemental, Analogical, Inimical, and Antidotal.

A complemental relationship may be thus explained: When drug "A" has exhausted its ability to produce any further good effects upon the organism, and drug "B" is administered and completes the cure in the

same uninterrupted manner commenced by "A," "B" is acting as though animated by the same virtue contained in "A;" the fact of one drug supplying or *complementing* that which is lacking in the other (i. e., the ability to carry the curative process further), illustrates such a relationship. Thus, aconite may begin the cure of a case of bronchitis, and bryonia may complete it.

Analogues are simply drugs that act more or less similarly. Thus, belladonna and hyoscyamus are analogues.

The inimical relationship is illustrated by drugs that are supposed to interfere with each other's action. Thus, drug "A" may carry a case to a certain point on the road to recovery, and then cease to produce further curative effect, when drug "B" is given, and if the two drugs be inimical drug "B" will not only not continue the cure but will undo all the good drug "A" has done, complicating the case and materially retarding recovery.

The antidotal relationship is illustrated when one drug has produced undesirable

effects upon the organism, and another drug is given that will counteract these effects.

Antidotes are usually drugs whose action is exactly opposite that of the drug to be antidoted, but in some instances antidotes may be drugs whose pathogenetic effects are very similar, and instead of the principle of dissimilars being illustrated by the antidotal action, the principle of similars is illustrated. The reference here intended is to the antidoting of drug effects which fall short of full intoxication, and consequently when an antidote is used which acts similarly to the drug which has caused the undesirable effects, the antidote is simply a homoeopathically indicated remedy.

Let us now discuss these alleged relationships a little more fully, and to open the subject it is well to say that the postulate to be offered primarily is, that the only relationship between drugs above the sixth decimal dilution (to adopt an arbitrary standard), is the analogical relationship.

The question of low and high dilution-limits always has been, and still remains, unsettled. We all agree in considering the

first and second decimal dilutions of the majority of drugs, low, but we can go very little beyond this point without poaching upon dangerous ground. Any preparation of a drug in which the crude substance is diluted to however slight a degree, is an attenuation, a dilution of that drug. Any drug that has been so diluted that one drop of that dilution contains but the one-millionth part of a grain of the crude substance, is certainly highly attenuated; the sixth decimal dilution, therefore, may be considered a "high" dilution. But as all things, big and little, are relative, the sixth decimal dilution sinks into insignificance as a claimant to high "potency" honors when we bring it into the presence of the twelfth, the thirtieth, or the two hundredth dilution; but as crude drug substance is here adopted as a starting point, the sixth decimal dilution may correctly be regarded as a representative of infinitesimal drug dilution.

Having trenched to this extent upon an old battle-ground, and made some definite statements which will have more or less

bearing upon succeeding pages, we will now examine somewhat closely into the conduct of the human organism when two drugs are introduced into it, either together or in quick succession, that an understanding may be had of some of the frequently accepted drug relationships.

A drug is introduced into the system, and its effects are produced. Before these effects are exhausted another drug is given and the organism attempts to react upon it in the usual manner, but is prevented by the deviation from normal health caused by the reaction to the first drug. The result is an effect which is a modification of the simple action of the first drug, due to the attempt of the organism to react normally against the second drug without full success. The ultimate result is a condition of the organism differing from its normal action in relation to either drug, or the sum of its normal action in relation to both drugs. If, however, one drug be largely in excess of the other—in quantity or in power, whatever the latter may mean—the greater quantity or power will ultimately

triumph, and its effects will develop with little or no evidence of other drug influence. The same quantity, or power, of a drug will not always produce the same degree of effect in every individual, because of the various degrees of susceptibility to drug presence natural to different individuals. This fact is illustrated in an extreme in some animals that are not injured by the ingestion of some substances that are toxic to man, e. g., "the rabbit may be fed for days entirely upon belladonna-leaves without injury." Although some experimenters may obtain *bona fide* effects from matter in extremely minute subdivisions, yet, as already stated, there is without doubt a limit to drug dilution, beyond which even the most sensitive will fail to respond.

It may be safely asserted that no effect either good or bad can be produced upon a diseased organ by a highly diluted drug, unless the attenuation be prepared from some drug that has demonstrated—or will demonstrate when given to the healthy—an affinity for the diseased tissues upon which it has a beneficial influence when given in

dilution. That such attenuations of drugs will affect a diseased organism, is due to the greater irritability, sensitiveness, of the organism to impressions when in a pathological condition than in a state of health. Therefore, unless a highly diluted drug be indicated because of its pathogenetic affinity for the tissues involved, it will have no more effect upon the diseased than it will have upon the healthy organism.

As a consequence, it is immaterial, when diluted drugs are given together or in quick succession, whether they are what has been considered "dynamically" congenial or not, because there must be the proper susceptibility of tissue to the dilution, which means that the drug dilution must produce sufficient irritation to cause reaction against it.

From the foregoing it may be deduced that highly attenuated drugs bear neither an inimical nor an antidotal relationship to each other.

Concerning the complementary relationship, it may be stated as a fact, that any drug indicated after another drug has already finished its curative work in the dis-

eased organism, without having completed a cure of the patient, is the complement of the first drug.

It is the experience of medical practitioners that some drugs are more frequently indicated sequentially, in certain pathological conditions, than are others. This is because the given conditions pursue substantially the same course in the majority of cases. Here it is that some drugs earn the reputation of being complements to others. The explanation is, obviously, that these reputed complements are simply indicated in the different stages successively through which the disease passes in its pathological progress.

Relative to supposed antidotal and inimical relationships of highly diluted drugs, it may be asked: If these relationships do not exist, why is it that so many cases apparently illustrative of such relationships have been cited in the past?

It is because, on the one hand, where a highly attenuated drug is supposed to have produced an aggravation, the alleged antidote, when given, either does not act at all,

and so allows the organism to recover from the aggravation, or the supposed antidote is simply the properly indicated remedy for the case, no aggravation really having existed.

On the other hand, when two highly attenuated drugs are supposed to act inimically, the fact is that neither is indicated, and the disease simply progresses regardless of the attenuations used. When the proper remedy is given, be it crude drug or high attenuation, the case improves. *Apis mellifica* and *rhus toxicodendron*, are said to be inimical to each other, as are also *bryonia alba* and *rhus tox.*; but I have deliberately given these two pairs of drugs, respectively, not only in close succession, but mixed together, and in no instance have I seen bad results follow. Either no effect was observable, or the patient was benefited by the prescription. Of course such experiments may be regarded as "mongrelism" of the most pronounced type, but they prove my point.

So far as the analogous relationship of drugs is concerned, it is obvious that the

question of drug dilution has nothing to do with it, as the effects of two analogues resemble each other more or less closely whether both be used high or low. Analogy is, rather, a relationship of drug effects to be considered in selecting one of a number of similarly acting drugs, best suited to the case in hand.

Concerning this relationship of analogy Hempel and Arndt, in their "Materia Medica and Therapeutics," remark that "Every drug constitutes a physiological unit, essentially different in its character and action from every other drug, and not admitting of being substituted for, or replaced by any other drug of the series." For this reason the authors have "refrained from constructing series of analogous drugs." Such an omission in a work of the character of that above quoted, may be properly considered a decided mistake.

While it is true that no theoretically, perfectly indicated drug, can be substituted for another, yet, for the practical application of drugs to diseased organisms, it is necessary that the physician have a number

of drugs in mind which resemble each other more or less closely in their effects upon man, for it is not always possible to make a "home thrust" every time, and as facts compel all practical, thinking physicians to acknowledge that the practice of medicine is now, always has been and always will be, more or less of an experimental art, so, as it sometimes becomes necessary to alter the first prescription in a given case, the practitioner should know something of drug resemblances. And further, this study of similar features of different drugs, when properly systematized becomes the most satisfactory and scientific of all methods of acquiring knowledge of therapeutic value. There is no other way to attain as thorough knowledge of drug effects.

Although analogues may be of the same botanical family, or of the same class of chemical compounds, yet this is not always so. Sometimes two drugs will bear strong resemblances, though they are entire strangers from every other standpoint. Neither botanical, chemical, nor any other superficial resemblance is concerned in this

relationship; it depends entirely upon the resemblance of drug effects. This tracing of resemblances can be carried too far, and therefore only drugs with very close resemblances should be classed as analogues. It is in the general sphere of action of drugs where vital resemblances must be sought, the details serving as corroborative evidence.

In concluding the subject of drug relationships it may be suggested, that in the use of crude drugs the antidotal kinship may assume important proportions, but when prescribing highly diluted drugs this relationship may be safely disregarded. The foregoing has been offered as sustaining the primary postulate of this argument.

DRUG AGGRAVATION.

Some reference was made to drug aggravation when speaking of the supposed relationships of highly diluted drugs; we will examine the subject a little more closely. A drug aggravation is what may be termed an over-effect of a drug that is homoeopathic to the condition for which

it is prescribed. That is, the indicated drug is given in either too large a dose, or it is given in the proper dose, or preparation, but is repeated too frequently, or is continued too long a time. The result is, that the organism is stimulated at first to the proper extent to obliterate the existing similar pathological condition, but the stimulation being excessive, the drug disease becomes developed in excess, and hence, what is known as an aggravation results.

These drug aggravations are not accepted by all physicians; some practitioners claiming never to have seen such a result. Other physicians, however, go to the opposite extreme and are constantly seeing drug aggravations.

A drug aggravation is certainly a possibility, its development depending entirely upon the sensitiveness of the individual patient to drug influence. Sometimes a patient is particularly sensitive to one drug, and not to others, e. g., I have known an individual with whom it was not wise to use belladonna, another who could not take arnica without disastrous consequences,

and another in whom rhus toxicodendron given in infinitesimal proportions would always produce strangury. And so it may be, probably is, through the whole list of drugs in the materia medica, each drug acting intensely upon the subject especially sensitive to its influence. Such hypersensitiveness, however, is fortunately somewhat rare, and one may practice for many years without encountering a single drug aggravation.

A study of this subject teaches us that every physician should be a close student of human nature, with all its oddities, and especially its hypersensitiveness to influences in general and to drug influence in particular; and it also teaches that one is far more apt to realize that which he expects than that which he does not expect, and that drug aggravations are far more prevalent in the imagination than in fact.

ALTERNATION OF DRUGS.

We come now to a question which has excited much bitter controversy; the question of drug alternation.

As no two similar forms of disease can exist at the same time in the same organism during the state of full development of the two conditions, so the effects of no two similar drugs can develop in the same organism at the same time. But as one disease condition *can* exist fully developed synchronously with another dissimilar disease condition—as an old leg ulcer and an acute attack of gastritis, or diarrhoea, or smallpox—so can one drug produce its effects on the organism synchronously with the effects of another drug which produces dissimilar effects. Hence, we find that when two dissimilar morbid conditions exist in one organism at the same time it may become necessary, or not improper, to prescribe a drug for each condition.

This may be considered legitimate alternation, and perfectly consistent with homoeopathy; for if two conditions existing in one organism at the same time are dissimilar, and no one remedy can be found to cover the majority of disease manifestations, then if it be deemed necessary to cover the whole condition of this doubly

diseased organism, there is nothing left but to prescribe two drugs. (The usual course, however, is to postpone attacking the chronic condition of the patient until after the acute condition has disappeared; but the above-noted course may be followed.)

There is another kind of alternation, however, against which the thunder of the purists has been hurled. This is the alternation of two drugs in a single group of morbid manifestations. According to law, homoeopathic law, these men preach the correct theory; but there is none, except the most metaphysical and impractical of homoeopathic practitioners, who does not sometimes alternate in just such cases.

If this practice be in opposition to the law of similars, and the men who alternate really do believe in homoeopathy, and conscientiously practice medicine for the "best good to the patient," why do they resort to so unscientific a course?

It is because of the unreliability of the alleged results of drug pathogenetic experiments conducted by homoeopathic experimenters. It is because drugs have not

been systematically and scientifically tested upon the healthy. It is because the materia medica from which the homoeopathic practitioner draws his "therapeutic indications," is constructed of just enough solid material to redeem it from utter repudiation by all seekers after truth. It is because the purists (the men who call the alternator "hybrid," "mongrel"), have in the past refused to acknowledge any defects in the great accumulation of rubbish in which reliable drug effects have been buried, because they have accepted authority for truth and not truth for authority, have refused to listen to the voice of science, the Hahnemannian voice, and have not only refused to reconstruct but have decried all attempts on the part of earnest truth seekers to remedy demonstrable defects, and by practical demonstration through modern methods of precision, place homoeopathy side by side, in the eyes of the world of science, with all other laws of nature. But

"The mills of God grind slowly,
Though they grind exceeding small,"

and the day has at last come when this unscientific domination is ended, when men may meet in counsel and differ without bitterness, and we are apparently standing on the threshold of new developments, which will eventuate in a reconstruction which will furnish material whereby the practitioner of homoeopathy may intelligently use the single remedy, and not find it necessary to so often alternate. In this new day, that is apparently dawning, the storehouse of the therapist will be constructed in accordance with a careful reproof of our principle drugs, at least, and a close study of their detailed effects; but until this great work is accomplished the make-shift, alternation, will continue to be practiced even by the most successful exponents of homoeopathy.

In the present imperfect state of knowledge of drug effects, men cannot be expected to abandon methods and customs with which necessity has forced them to become familiar, and which have proved satisfactory. When a physician knows from experience that by prescribing two drugs

in a given case, the patient will almost certainly recover, he neither desires, nor would he be justified in ignoring the results of his experience. And further, when a practitioner has been unsuccessful through treating certain conditions with *one* drug, and successful when he has alternated, he can not be expected to abandon his "mongrelism," because of a hue and cry raised by theorists whose hypnotic influence is often far greater than their knowledge of practical therapeutics.

Every medical practitioner, however, should endeavor to avoid alternating as far as his knowledge will permit, but when in his judgment "the best good to the patient" seems to require more than one drug, he may alternate under protest, perhaps, but never with the feeling that he is doing something of which he need be ashamed, or which is in any degree wrong, but to which he is driven by force of circumstances.

A SEQUENCE OF PATHOGENETIC DRUG SYMPTOMS.

A regular and invariable sequence of symptoms following the pathogenetic use

of drugs has been taught as observable in proving-records. A careful examination of such records, however, fails to find this alleged sequence. This belief in such a drug-symptom sequence was a theory of Dr. A. W. Woodward, during his life, and the patiently prepared book which stands as a monument to his memory, contains records of thirty-four drugs whose symptoms were carefully studied for the purpose of proving this theory.

While it is true that a majority of the experimenters generally agree in the tissue first attacked, yet even in this study of Dr. Woodward's, but two of all the thirty-four drugs mentioned attacked the same tissue in *all* the experimenters primarily; but the uniformity goes no further, for in each case the succeeding groupings of details diverge. In twenty experiments made with one drug but fifteen showed involvement of the same tissue primarily; in forty-seven experiments with another, nineteen only showed the same tissue attacked first; in twenty-four with another drug, fifteen only; in thirteen

with another, eight, and in twenty-four with another, but sixteen.

There is nothing remarkable in this evidence of lack of uniformity of the initial symptoms of drugs, when it is remembered that all organisms are not equally strong or equally weak at the same points. Physical organization and mental temperament have much to do with the sequence of symptoms presenting in drug experimenters. If provers could be classified according to their temperaments and tissue resistance, it is probable that in each class a uniform sequence of symptoms could be detected, but until that can be done it is doubtful if such a satisfactory study can be made, and certainly a uniform sequence of all symptoms must remain impossible of demonstration. Could such classification be satisfactorily made, the practice of medicine would be much simplified.

CHAPTER VIII.

PRIMARY AND SECONDARY DRUG EFFECTS.

In the preceding pages, some reference has been made to the fact that it is the organism into which drugs are introduced to which resulting manifestations of action is due, and not the drugs. Believing this to be the case, a consideration of the question brings us face to face with the old problem of primary and secondary effects of drugs, but with the difference that we are now prepared to regard the problem in a new light

Comparatively little has recently been written on this subject. In the past, however, many theories were advanced. In his "Lectures on Homoeopathy," Dr R. E. Dudgeon has presented the theories of sixteen different men, including the views of Hahnemann and of himself.

Without exception, all these sixteen theories are based upon one common error: the assumption that drugs are vitalized entities empowered with power to act. Of all these theories it is necessary to call attention to the detailed views of but one man, Samuel Hahnemann, and this is done because all the other views have been formulated simply as a result of the line of thought that was initiated by this great thinker.

Hahnemann first taught that drugs have two actions, a primary or *direct* action, and a secondary or *indirect* action. The primary action was that upon which the application of homoeopathy depended; the secondary action was that upon which the application of antipathy depended. From the former permanent results were secured; from the latter palliation only

Later in his career his views underwent a change, and we find Hahnemann teaching his theory of *alternating actions*. As Dr. Dudgeon says: "Without revoking formally his previously expressed notions of *primary* and *secondary* action, Hahnemann states that he applies this new expression

to designate 'the alternating condition of the different paroxysms of action of the primary action.' " In fact, the alternating action of drugs really usurped the place of the secondary action in his theory, that secondary symptoms might also be utilized in therapeutics. Finally, as we proceed in a consideration of Hahnemann's views, we find that he does not refer to either primary, secondary, or alternating drug action, but apparently considers that all symptoms, following the administration of a drug for pathogenetic purposes, are equally useful in the practice of homoeopathy; so that from having a most definite theory of drug pathogenetic influence, Hahnemann ultimately bounds his views by no system whatever, and opens wide the doors to the most glaring irregularities and inconsistencies of thought and action. But without doubt uncircumscribed liberty in this field of drug pathogenesis is far better than the hide-bound bigotry that may come of adherence to theories that lack plausibility, and Hahnemann probably was impressed by this

fact when he was compelled to yield his undemonstrable theory of drug action.

Hahnemann's fatal mistake was his neglect to note the fact that in drug pathogenesis it is the *experimenter* that is just as much to be considered as is the patient in case of sickness from ordinary cause. He tells us to consider the patient and not the disease, and he should also have told us to consider the experimenter and not the drug. That he did believe drugs contained independent vital power is set forth in Section 63 of the Organon (Hering's 1848 translation), in which Hahnemann says of the "primitive" action of drugs: "Although this is the joint effect of both a medicinal and a vital power, it belongs, notwithstanding, more particularly to the former, whose action is exercised upon the body." In other words, here is a claim that this independent drug vitality is more definite and pronounced than is the vitality of the human organism. Here, therefore, is the vital error in the theories of pathogenetic influence, the belief that drugs are independent vitalized entities, endowed with power to act.

It may be safely counter-asserted that in this perplexing problem of drug influence upon the human economy, there is but one force at work, and that force is the life-giving principle of the organism, call it *vis medicatrix naturæ*, recuperative force, constitutional strength, or what you please. When this view is adopted the problem becomes simplified, as I hope will be made evident in the following discussion, of which these remarks form the prologue.

When a substance is introduced into the human organism, whether through the stomach, through the veins, or in any other manner, the organism at once proceeds to *do something* with this substance. If the substance be a food, if it be an unassimilable and unabsorbable foreign body—as a cinder in the eye, or a bullet in the *psoas magnus*—or if it be a grain of mercury or opium, or a pungent odor, the fact is the same, the organism undertakes to *do something* in relation to the substance introduced. It matters not that force, muscle or fat may be ultimately extracted from the intruder, nor how full of life-giving factors it may be, nor

what other changes may occur in the organism because of the presence of the foreign substance, the fact remains that it is the organism into which it has been introduced that assumes a definite, active attitude, and which activity is due to the vital principle by which the organism is animated.*

Recognizing these facts, we at once find it necessary to acknowledge the expression "drug action" just as incorrect as *food action* or *bullet action*. We may, however, be permitted the use of the term "drug action" for convenience of expression, if our mental attitude attests us to be fully aware of the true relationships in this problem.

The question may pertinently be asked, if there is no such thing as drug force, why does the human organism not give the same symptoms as a result of the administration of any drug, and all drugs, indifferently? The reason is, that each drug is an individual, and, because of the characteristics which make it an individual, causes the or-

*These remarks do not apply to microbes (which are themselves individual organisms), nor to chemical agents, which produce reactive changes dependent upon the law of affinity, but to "physiological" agents.

ganism to assume an attitude indicative of its presence. The presence of the given drug causes a disturbance in the organism because of the atoms of its molecules being brought into contact with the atoms of the molecules of the cells of which the organism is composed. The atoms of different drugs are differently polarized (most probably), and made up of different substances, whose presence causes different changes to occur in the atoms of the cell molecules of the organism, and as a result different attitudes are assumed, which are manifested in the different symptoms following the administration of different drugs. As drugs do not act, and because of its nature, the human organism must "do something" with a drug when it is introduced within the scope of its action, those new manifestations that appear immediately after a drug is administered to an experimenter are, of course, due to the action of the organism in its effort to "do something" with the drug. In other words, all manifestations of functional derangement or of organic change occurring after the administration of a drug

(if it has not occurred recently before) may be regarded as due to the effort of the organism to assume some attitude towards the administered drug.

As a result of this effort to "do something" with the drug, two kinds of manifestations occur, which manifestations are usually called primary and secondary symptoms, respectively. The primary symptoms are those which appear earliest and continue until a set of symptoms develop which are opposite or different in character, e. g., primarily diarrhoea may occur, and secondarily this is followed by constipation, or primarily stupor, and secondarily insomnia, etc. Such being the case, we are naturally led to inquire into the significance of these two sets of effects, desiring to know why such opposite manifestations should occur during the effort of the organism to dispose of the intruding drug. According to the theory that seems plausible to me, the process is dependent upon force-expenditure or activity, and force-recuperation or rest. When a drug is introduced into the organism of the experimenter, the organism, as

before suggested, at once proceeds to act. This action is continued as long as the organ or tissue involved is able to give expression to energy; but when a point is reached beyond which function will not go, a cessation of effort occurs, and the manifestations cease. Following this primary action may be a complete cessation of energy, slight evidence of reaction, or decided secondary symptoms.

In the first instance the stimulus due to the drug under test is not very decided, and hence, the primary effort is slight, continues for a short time, does not require the expenditure of much force (i. e., does not over-tax the working powers of the organ or tissue chiefly affected), and leaves little evidence of its presence behind. On the other hand, when the stimulus is strong, the working powers of the organ or tissue involved (or the whole organism, as the case may be), are over-taxed, and, hence, the secondary manifestations are not merely expressionless passivity, but show a relaxation of the organism beyond simple rest, and as a result symptoms appear which are indic-

ative of this relaxation. Such is the usual course pursued by the bodily functions when drugs are administered for experimental purposes, but there is another attitude which the organism takes towards some drugs. Such drugs cause no apparent disturbance at first, beyond possible slight manifestations. In consequence, the working power of the organ, tissue or organism, as the case may be, is not rapidly exhausted, and for a long time symptoms, or even organic changes occur during the primary attitude of the organism. Following this slowly progressing primary attitude there is little evidence of secondary expression, because the vitality or working power of the organism is so slowly and quietly expended, and the recuperation takes place so slowly and quietly that its manifestation is most difficult of detection. The metals may be regarded as good illustrations of drugs which will produce effects of this character.

From these facts the following principle may be deduced: The greater the degree of stimulus of the pathogenetic agent, the

shorter the time and the more violent the manifestations of the primary attitude of the organism; and the milder the degree of stimulus of the pathogenetic agent, the longer the time and the milder the manifestations of the primary attitude of the organism.

The next point to claim our attention is, how to separate primary and secondary symptoms. It is a well-known fact that all primary symptoms do not cease before the secondary symptoms develop, but that they will sometimes cease for a short time, to be followed by the secondary manifestations, which will again be followed in turn by the primary symptoms, and so on, until the disturbance gradually subsides.

There is, apparently, no definite limit when primary action ceases and secondary manifestations begin. When we remember that primary action is due to the first effort of the organism to do something, we may readily understand that as soon as this effort is exhausted primary activity is at an end, and not before, and the secondary or passive attitude commences, which latter

will continue just as long as it is necessary for the organism to recuperate its exhausted working powers, and no longer. As some organs and tissues have greater vitality—or working power—than others, i. e., are inherently stronger, so it will be that in some organs and tissues the primary effort will continue longer than in others with less resisting power. The primary attitude will, therefore, continue longer in the organs and tissues with the greatest amount of working power, and the secondary attitude will continue longer in the organs and tissues with the least amount of working power. Hence, we will find that the organism will give evidence of both primary and secondary action in progress at the same time, the primary attitude of some organs and tissues being ended much before the primary attitude of other organs and tissues. For this reason great care should be exercised in studying the pathogenesis of drugs, for it is no easy matter to separate all the various primary and secondary manifestations which are present in the organism at the same time. The task, however, can be ac-

complished by noting carefully the character and pathological tendency of the first manifestations of the organism, and classing all symptoms as *primary symptoms* that are consistent with this character and pathological tendency; and all symptoms that are inconsistent in character with these first manifestations, and show a derangement of the organism that tends in a different direction, should be regarded as *secondary symptoms*.

Having now seen that primary pathogenetic symptoms and conditions are those that result from an active attitude of the organism, due directly to the presence of the pathogenetic agent, and that secondary symptoms and conditions are due to a passive or negative condition of the organism, and not directly to the presence of the pathogenetic agent, it not only becomes evident that the two classes of symptoms should be separated, and that one class only should be used as a foundation for homoeopathic prescriptions, but it becomes equally evident that primary symptoms constitute this important class.

While it is true that every condition and symptom occurring after the administration of the drug to the prover may be significant of something, yet it does not of necessity follow that all these occurrences must have the same degree of significance. It has been suggested that the primary manifestations have a significance for the therapist, and that the secondary manifestations do not have such significance. The significance of these latter details relates to the negative condition into which the organism falls after its primary effort is expended, and is of interest to the therapist only from an antipathic standpoint, as suggesting the state into which the organism may ultimately be forced if an antipathic agent be prescribed for the existing clinical condition.

At this juncture the fact is called to our attention that the same set of primary pathogenetic effects will not follow both large and small doses of the same drug. The primary effect of a small dose of some drugs will be the same as the secondary effect of a large dose of the same drug. In fact,

there are different shades of expression of the effects of the same drug through its various degrees of subdivision, from the crude substance to the highest dilution capable of producing pathogenetic effects. It is this fact, together with the great variety of drug subdivisions that have been used in making our symptomatologies that renders the study of materia medica and the art of expert prescribing according to the law of similars so extremely difficult; and this difficulty will continue until some definite amount of drug substance, crude or diluted, be adopted as the standard of pathogenetic dosage. (Of course each drug must have its own dosage standard.)

The adoption of such a standard would have no effect upon those who desired to experiment upon animals with doses of various sizes, nor need it prevent similar experiments upon human beings; but it should prevent the *recording* of such confusingly varied effects of drugs, obtained from such a variety of preparations, as knowledge ready for therapeutic applica-

tion. In fact, this haste to record experiments is one of the curses of the present age. Instead of waiting until some definite result of real value has been demonstrated, the experimenter rushes into print with his preliminary efforts, his "dead work," and expects to be accorded a place among the benefactors of mankind. This applies to all branches of science and of art, as well as to medicine. There is no reason why experiments of all kinds, with all amounts of drugs, from the crude substance up to the most infinitesimal subdivisions, may not be made; but for the love of accuracy, such things should be kept out of the printer's hands until some demonstrable, definite and valuable results have been obtained. What physiological medicine needs is systemization and contraction within intelligent and intelligible limits. Drug experimenters, especially in the homoeopathic school, have gone wild with pathogenetic diffuseness. Our works on drug symptomatology are filled with alleged records of drug effects from toxic doses of the crude drug, and

all degrees of decimal and centesimal subdivisions up into the metaphysical domain of the fluxion dilution. All this medley is laid before us in the expectation that we will be able to apply the details to the healing of the sick in accordance with a therapeutic law. Is there a greater absurdity in the history of the world?

Though we live to be as old as Methuselah and continue to study these commingled drug effects to the day of our death, we will not understand how to practice medicine as perfectly as it would be possible for man to do in an ordinary lifetime when a pathogenetic dosage standard has been adopted. Suppose every known dilution of drug substance will produce results, of what practical utility would such knowledge be, even if we could remember it all? It is a fact that every drug substance capable of causing disturbance in the human organism has not only one but two sets of effects following its administration, so that each one of the dilutions will have two sets of effects (more or less intense). Although the effects of all dilutions may bear

a greater or less resemblance to each other, yet they are not the same, and as we depart further and further from the crude drug, we approach nearer and nearer to the point where the primary effects of the crude drug and its derivative become as opposite as are the primary and secondary effects of the same crude drug.

Our crying need is concentration. Varied experiment is right and necessary, but for working knowledge we do not need such experimental immaturities as may be found filling our text-books. The task of selecting a remedy is often sufficiently difficult when we consider primary symptoms alone, but when conflicting secondary symptoms are introduced into the problem, without statement of source of preparation of drug alleged to have produced them, the practice of medicine is rendered thereby additionally and needlessly difficult. As an example, we may refer to the symptomatology of camphor recorded in the *Materia Medica Pura*. Here we find noted, both "pale face" and "red face"; "contracted pupils" and "dilated pupils"; "cold sensation in the

epigastrium and hypogastrium" and "violent burning heat in the epigastrium and hypogastrium"; "exalted sexual desire" and "impotence in the male"; "sopor" and "sleeplessness"; "small, slow pulse" and "full, quick pulse"; "coldness of the body with paleness" and "increased warmth of the whole body, with redness of the face"; "sweat" and "very dry skin"; "cold sweat" and "warm sweat."

In the same work the following contradictory symptoms are credited to the pathogenetic power of arsenicum: "Photophobia" and "obscuration of sight"; "deadly paleness" of face, showing too little blood, and "bluish, discolored face," showing too much blood; "absence of thirst, loss of thirst" and "uncommon thirst"; "slimy mouth" and "great dryness of mouth"; "loathing of all food" and "great appetite for milk"; "burning in the stomach like fire" and always an internal chilliness in the epigastric region"; "constipation of the bowels" and "diarrhoea." "Ineffectual urging to stool" and "stools pass without his knowledge"; "diminished flow of urine" and

“increased flow of urine”; “dryness of the nasal cavity” and “discharge of acrid fluid from the nose”; “severe fluent coryza.” “In the ankle and knee-joints tearing, only when moving,” “the pains in the foot are aggravated by movement” and “the nocturnal pains only become tolerable when he walks about,” “severe tearing in the arms and legs, owing to which he cannot lie on the side, where it tears; it becomes most tolerable by moving about the part where the tearing pain is”; “great inclination to sleep,” “constant inclination to repose” and “sleepless tossing about at night in bed,” “could not get to sleep”; “very slow pulse” and “quick, weak pulse”; “irritated state of the disposition” and “tranquility of mind”; “ill-humor” and “good-humored”; “anxiously impatient” and “great calmness of the mind and cheerfulness”; “tranquil, serious mood” and “more disposed to gaiety.”

It is unnecessary to quote from other symptomatologies; these are sufficiently typical.

Which of all the details in both camphor and arsenicum are primary and which are secondary, respectively? Which are characteristic of the influence of the drug, and which are not? Which are caused by large doses, and which by small? What degree of subdivision is curative of which of the similia of these details when occurring in the sick? Both sets of effects noted cannot be used as a therapeutic basis for prescribing these drugs, if we give them in the same dose.

This compels us to confront the question of therapeutic drug dosage, i. e., drug dilution, attenuation, potency, as you please to phrase it; which, however, is of less importance than the knowledge of which are the primary effects of drugs, and the particular amount of dilution of drug used to produce primary pathogenetic effects. When this last is known the amount of drug prescribed therapeutically will be largely a matter of personal experience. I say largely, but not entirely, because when we know the amount of drug from which the pathogenesis of primary effects is obtained,

we know enough without experimenting to give less of the drug than has been used to produce the pathogenetic effects. As to how little of the drug will be sufficient to produce curative effects, the special susceptibility of the specially sensitive patient must decide; and the experience of the physician will inform him what will produce curative results in the average patient.

Relative to the contradictory details to which attention has been called, how is it possible to apply the law of similars with the best effect when our prescriptions are based upon such data? Such a condition of our symptomatology is calculated to destroy confidence in the boasted superiority of our system of therapeutics. In truth, it is not surprising to be aroused to the fact that the more one examines into such things the more one is justified in a belief that homoeopathic practitioners, as well as those of other schools, cure through psychological influence, or the *vis medicatrix naturæ*, quite as often as they do through drug prescribing.

A factor in remedying such a state of affairs is the suggested adoption of a standard of pathogenetic dosage; but this means a departure from our time-honored effort at individualization of all things pertaining to drug pathogenesis and therapeutics. While it must be recognized that the mind of man is the highest achievement of evolution, yet it must also be acknowledged that the mind of man has its limitations, and one of these limitations is the impossibility of pathologically and symptomatically individualizing every human being demanding therapeutic aid. Of course, we must perceive the fact that no two individuals, whether organic or inorganic, are exactly alike, and that if we wish to produce the *best* results of any kind in any individual, we must apply our result-producing agent to that given individual because it is suited to that individual, and to no other. This is what man could do if he were omniscient. However, when we come to deal with large numbers of individuals, we are compelled, through lack of time, if for no other reason, to find a result-producer that will

cause approximately good and desirable results in more than one individual. Hence, we find ourselves classifying our individuals into groups with certain resemblances. Thus, in the practice of medicine we find it impracticable to treat every individual literally as an individual, and are compelled, because "art is long and time is fleeting," to generalize more or less and strike averages, grouping our patients possibly into temperamental classes, neurasthenics, hydrogenoids, sthenics, etc., and as a logical result, our drugs assume generalized groups applicable to average conditions in average men and women. Not that we allow ourselves to generalize without regard to the fact of the individuality of both drug and patient (for this idea of individuality must always be considered to a greater or less extent), but we generalize to the extent of demanding what conditions and symptoms drugs will cause in the *average* human experimenter. We must have some drug that we know will cause a febrile movement in the average experimenter, and some drug that we know will cause

mental depression in the average experimenter, and some drug that we know will produce diarrhoea, and some drug that we know will produce motor paralysis, etc., etc. Of course, the greater the number of fine details the given drug will cause in the average experimenter so much the better for the practitioner and his patients; and as a matter of fact, each drug must cause a sufficient number of details in the average experimenter to give it a certain generalized individuality, otherwise it cannot be used with prospect of definite results. This is the aim of the modern progressive practitioner, and it is possible of attainment through a study of primary pathogenetic drug effects.

According to this philosophy, a belief in the "totality of symptoms" must be left to others to foster. As heretofore remarked, while stopping to seek for the "totality of symptoms" before making a prescription, the patient will either die or recover before we succeed in our search. "Totality" certainly means the whole, and while the whole of the condition of the patient is

to be considered, we must not only regard the pathological condition, but also all the objective and subjective symptoms of the case, and, having done this, we must find a drug that has the exact similimum of this perverted patient in *every* detail. Imagine the difficulty of constructing such a picture from the pathological and symptomatic condition of the patient, and then imagine the still greater difficulty of selecting the similar "totality" from our existing pathogeneses—the search for the "totality" similimum through the heterogeneous collection of primary and secondary symptoms of all manner of drug preparations, in some instances from the crude drug to the thirtieth dilution. The Augean task pales into insignificance beside this stupendous undertaking.

Medicine is practical or nothing. The practitioner demands pathogenetic material that is capable of therapeutic application in fact, and from which positive results may be obtained. He will not be satisfied with "glittering generalities" and beautiful hypotheses that can only be realized in Utopia.

In conclusion, it is but necessary to submit the following summary :

1st.—Drugs do not act; it is the organism into which they are introduced that acts and exhibits the symptoms credited to drugs.

2nd.—So-called primary and secondary drug action is due to the attitude of the organism; the first attitude being one of activity, and the second being one of passivity or negation.

3rd.—The greater the degree of pathogenetic stimulus the shorter the time and the more violent the manifestations of the primary attitude of the organism, and the milder the degree of pathogenetic stimulus the longer the time and the milder the manifestations of the primary attitude of the organism.

4th.—Primary symptoms are those symptoms that occur first after the administration of the pathogenetic agent, together with all other succeeding symptoms that are consistent with these first symptoms and that have the same pathological tendency.

5th.—All symptoms that are inconsistent

in character with the first pathogenetic manifestations of the organism may be considered secondary symptoms.

6th.—Primary symptoms are those upon which all homoeopathic prescriptions should be based.

7th.—The same primary effects do not follow both large and small pathogenetic doses of the same drug; but the secondary effects of a large dose may be the same as the primary effects of a small dose of the same drug.

8th.—A standard of pathogenetic dosage should be adopted by all pathogenetic experimenters.

9th.—The “totality of symptoms” as a necessary foundation for a homoeopathic prescription is a fallacy, and impracticable in our present state of knowledge; but it is a beautiful theory, and as its fulfilment means the perfection of expert homoeopathy, we should strive to attain it as nearly as possible.

It but remains to make the following supplementary remarks in closing this chapter.

Granting that the secondary effects of drugs might be made useful for therapeutic purposes under some circumstances, this, nevertheless, would furnish no good reason for allowing such results to be classed without distinction with primary effects as of equal value and utility. Let us impress upon our minds the fact that it is the primary effects that furnish the most reliable indications for the use of drugs; that it is the primary effects that permit the practice of medicine in accordance with a definite system, and make of therapeutics an art based upon science.

There is no doubt that many cures were made through the ministrations of our aboriginal "medicine men," through the wearing of charms and amulets, by the "King's Touch," by the faith healer, by the christian scientist; but because of such cures, these means should not be classed among our therapeutic agencies.

In the past medicine suffered because of the absence of rationally constructed and properly classified therapeutics, but with the means furnished us in the instruments

of precision of modern science, together with the careful methods of critical analysis, there is no reason why a halt should not be called and an effort made to remedy the defects of the past.

The whole question of phenomena resulting from subjecting the human organism to conditions calling upon its reactive powers for the disposition either of food, pathological or pathogenetic material, is an illustration of nature's great primitive law of self-preservation. And from it we are taught the ever-recurring lesson, that nature is nothing if not conservative; that she never relaxes her efforts at self-preservation, and that this sublime law is at the foundation of both the noblest and the meanest efforts which constitute the vital manifestations of the universe, and especially upon this invariable conservatism of nature are founded the phenomena of natural and of drug diseases.

This chapter cannot be satisfactorily closed without again referring to the fact that a reasonable amount of generalizing is necessary for the practical application of

the law of similars. It is good theory, based upon science, that every patient treated in accordance with the law of similars, should have the drug given him that would produce in *him*, when in good health, the complete similimum of the condition from which he is suffering. This is the only way to apply homoeopathy in its strictest and most rigid scientific sense; but it is not practicable. Fortunately, the homoeopathic relationship is manifested in many different degrees, and the practical thing to be done, is, to prescribe the drug which has produced in the approximately healthy a condition as closely resembling the condition of the patient as it is possible to detect, upon comparison of the condition of the patient with the pathogenesis of the drug.

In some cases the requirements of science may be fully satisfied, in the selection of a drug that has an almost complete picture of the patient under consideration, and which, if given to this patient when in a state of ordinary health, would produce the most complete attainable similimum of the disease condition to be removed.

When this nearest possible resemblance between a disease state and a drug pathogenesis is discovered it is accidental, and therefore, in our present state of knowledge, the most complete application of the law of similars becomes an accidental application. It is possible, however, frequently with demonstrable prevision, to apply a drug which bears so close a resemblance, in its pathogenesis, to the patient to be cured, that the patient is restored to health in accordance with the law of similars; but the *complete* similimum is only applied in rare cases, and then by accident.

Having submitted the foregoing views on some vexed questions, let us next enter into a consideration of physiological drug experimentation in the light of the conclusions that have been drawn.

CHAPTER IX.

Critical Examination of Physiological Drug Tests.

From much that has been submitted in the preceding pages, the importance of the work of drug experimentation upon the normal human organism is emphasized. As to how such tests should be made many suggestions have been offered by various minds at various times. That the experiments of comparatively recent years, which have been made by believers in homoeopathy, have been subjected to much criticism, both favorable and unfavorable, is shown in the tenor of one of the subjects which was selected for discussion by the Committee on Materia Medica Conference of the American Institute of Homoeopathy, at its meeting in Detroit, in 1896.

The question there submitted, was, and which excited much discussion :

“In what particular has the proving of drugs deviated from the rules laid down by Hahnemann in the ‘Organon,’ and in what particular do Hahnemann’s rules and directions for proving drugs differ from, or fall short of, those required by the methods and precautions of modern scientific research.”

The consideration of this inquiry requires that a critical comparison be made between the work of drug experimentation of the followers of Hahnemann, and the rules prescribed by Hahnemann for such work, and also a comparison between these Hahnemannian rules and the requirements exacted by the most critical methods of “scientific research” known at the present day. In other words, to answer the question propounded, it is necessary that, first, the work of the followers be examined as to its thoroughness, taking the rules given by Hahnemann for such work as a standard, and, second, the rules themselves must be examined as to their efficiency in the light of modern scientific thought.

The proposed question may, therefore, be divided into two parts, each of which queries requiring separate consideration.

First then, "In what particulars has the proving of drugs deviated from the rules laid down by Hahnemann in the *Organon*?"

On referring to the *Organon of Homoeopathic Medicine*, Dr. Hering's translation, we find a number of sections devoted to a consideration of what Hahnemann regarded as requirements necessary to the construction of a reliable drug pathogenesis. It will be necessary, however, to refer only to those which have been infringed.

Section 121 says: "Finally, if we would try the effects of the weakest substances, the experiments must be made upon persons only who are, it is true, free from disease, but who, at the same time, are possessed of delicate, irritable and sensitive constitutions."

This has not been observed, as records of supposed effects of drugs, which were tested upon apparently *healthy* provers—which drug preparations were among "the weakest substances"—are found mixed together with the supposed effects obtained from *diseased* persons during the administration of these same substances. In fact,

Hahnemann himself infringes this section in his *Materia Medica Pura*, and herein sets the example for irregular practices in his followers. Section 142 may be offered as Hahnemann's excuse, but this should not excuse even the master, as there are too many possibilities for mistakes in attempting to distinguish pathogenetic drug symptoms under such circumstances, even by "masters in observation."

Section 124 proscribes the use of more medicines than one during the time of proving. This section has frequently been ignored, as is shown in records of assumed drug effects wherein other drugs have been interpolated for annoying symptoms, and also in cases where antidotes to the drug under test have been administered and the record continued after the use of the antidote.

Section 126 denies provers "all fatiguing labor of mind and body," but provings have frequently been made upon medical students who were at the time undergoing "fatiguing labor of mind." Hard-worked physicians have also made some provings.

Section 131 is so rarely observed that we may regard it as a universally broken rule among provers. Its entire quotation is necessary: "If, to acquire at least some knowledge of a medicine, it is found requisite to administer to the same person, several days in succession, doses of the same, progressively increased, this may show us the various morbid changes that this substance is capable of exciting generally; but we do not learn the order of their succession, and a succeeding dose often extinguishes one or other of the symptoms produced by the preceding one, or creates in its place a contrary state. Symptoms of this kind should be noted between two parentheses, as being equivocal, until new experiments of a purer nature shall have decided whether they are to be considered as the reaction of the organism, or the alternating effects of the medicine."

This section comes very near to the heart of the question, touching closely Hahnemann's understanding of the necessities and requirements of pathogenetic drug experimentation, and also involves his idea of

duration of drug action even when applied to therapeutics. If this section has been infringed by experimenters, then indeed the teachings and proving rules of Hahnemann have been disregarded. That this is the case, it is only necessary to refer to our standard collections of provings, where will be found records of single doses, daily doses, hourly doses, and even more frequent administrations, mixed together, in total oblivion of the Hahnemannian injunction that effects of drugs from frequently repeated doses "should be noted between two parentheses as being equivocal." No distinction between doses of varying frequency is noted, but the whole is jumbled together in one heterogeneous mass, in utter disregard of Hahnemannian sense, of common sense, of scientific sense.

Section 137 says: "If the dose be excessive, there will not only be several reactions visible among the symptoms, but yet more; the primitive effects will manifest themselves in a manner so precipitate, violent and confused that it will be impossible to make any correct observation." This has been ignored

in a number of proved drugs, among which thuja is notable. In this drug the doses were taken so large that the alcohol imbibed must have commingled its effects with those of the drug.

Sections 124 and 127 are stated in Section 138, to be "necessary to the trial of a pure experiment"; but, as we have seen, Sections 124 and 126 have not been obeyed—nor has Section 127, in relation to sex, always been observed—consequently the proving of drugs in the past is shown to have deviated from the rules laid down by Hahnemann, even if we consider no further infractions.

Again, Section 139 has not been observed by the average prover. Few drug experiments have been conducted with the care in recording symptoms herein enjoined.*

*Sec. 139. Where the physician does not try the remedy on his own person, and the experiment is made on another individual, it is requisite for the latter to note down, with perspicuity, all the sensations, inconveniences, symptoms, and changes, that he experiences, at the very moment of their occurrence. He must be also able to tell what time elapsed between the administration of the medicine and the appearance of each symptom, and in case they continued any length of time, what was the exact period of their duration. The physician is to read this report, immediately after it is finished, in the presence of the person on whom

In Section 142 we are told that the observation of symptoms of drugs which appear in disease conditions (pathogenetic symptoms due to the drug independently of the disease) should "be left to masters in observation"; but we find in our alleged pathogenetic symptomatologies records of symptoms supposed to have been produced by drugs during the treatment of patients for disease conditions, and which records have been made by those we would hesitate to call "masters in observation." In the work of compiling records of mixed drug effects reported in our literature, how many such superior minds are detectable?

From the sections of the *Organon*, to which reference has been made, it is evident that Hahnemann intended that drug experiments should be conducted with definite rules; but from the infringements noted it is equally evident that this intention of

the experiment is made; or if it lasts several days, he then reads it over each day, in order that, by refreshing his memory, the person may be enabled to reply to the questions which it may be necessary to put to him relative to the precise nature of each symptom, and to give him an opportunity of adding fresh details, or making necessary corrections.

the master has not been observed by his followers, either in accordance with the letter or the spirit. On the contrary, our records of experiments with drugs show a most censurable lack of system, which suggests either an ignorance of the *Organon* or contempt for the wisdom of its author, or both. Assuming, however, that this irregularity, which has characterized the drug experiments of the homoeopathic profession, is due to neither an ignorance of the book nor disrespect for its author, it becomes obvious that our experimenters were ignorant of the fallibility of human testimony; understanding nothing of the possibilities of collusion, self-deception, auto-hypnotism, etc.; knowing nothing—or showing no knowledge—of practical psychology, which is necessary to the management of a systematic test of drugs upon the human organism. However, until comparatively recently a knowledge of subjective influences was almost a sealed book, and even yet a knowledge of psychology in its application to material problems is in its infancy; and hence, our drug experimenters of the past

cannot fairly be held responsible for mistakes which were not due to individual ignorance alone, but to universal ignorance. Accountability is proportioned to knowledge, and consequently we can hold our pathogenetic experimenters responsible only for neglecting the duty which was plainly theirs, i. e., for not observing the rules prescribed by him whom they recognized as master of the art of drug experimentation. (I am speaking of the work of our drug pathogenetic experimenters as a whole, and not of the work of any individual, however closely the individual exceptions may have observed Hahnemann's rules.)

At this juncture we are confronted by a doubt as to whether or not the rules laid down by Hahnemann were sufficiently rigid for the purposes intended; whether, at the present stage of human history, we have not grown beyond the limitations of even the most progressive doctor of medicine of the early part of the last century. To answer this doubt, we will proceed to consider the second part of the question before us:

“In what particulars do Hahnemann’s rules and directions for proving drugs differ from, or fall short of, those required by the methods and precautions of modern scientific research?”

Hahnemann was not only abreast of the knowledge of the time when his work was done, but he was in advance in many respects. However, as no one denies that since the *Organon* was written, much progress has been made in all branches of knowledge, so likewise no one will deny it was impossible that Hahnemann should or could foresee all the future development of methods and of details for the more ready and more thorough demonstration of the principle of which he was the formulator. Consequently, when we regard Hahnemann’s rules for proving drugs we discover them to be inadequate to the purposes of modern experimentation, which latter methods bring to bear an amount of psychological and other special knowledge, of which the wisest men in the time of Hahnemann were ignorant.

Aside from the fact that Hahnemann's rules for proving drugs are not sufficiently rigid to conform to the requirements of modern methods of work and thought, I think we can fairly claim that they are not always practicable. This latter claim is sustained by a comparison of the two sections, 108 and 121, respectively (in which *healthy* individuals are stipulated as necessary for proving drugs), in the face of a demonstrable fact that a *healthy* human being is rare, the *approximately* healthy individual representing far more correctly the race of men now inhabiting the face of the earth, just as was also the case when Hahnemann wrote the *Organon*.

In a general way Hahnemann's rules are not sufficiently definite and stringent in the directions for preliminary health records, nor do they take cognizance of the necessity for the examination of provers' objective and subjective manifestations by specialists, simply because in Hahnemann's day specialists, such as we now have, did not exist. This last fact alone shows the rules in the *Organon* to be far behind the

requirements, nay, the necessities of science, and if no other reason existed, this defect furnishes sufficient cause for the formulation of new and better rules for testing drugs. There are, however, other important defects, an example of which is furnished in Section 138.* In my opinion this section has caused the addition to our *materia medica* of much adventitious material. Substantially, this rule states that *all* symptoms appearing in a prover during a drug test, even though such symptoms may have appeared before the test (a "long time" before are the words, but *how long* is not stated, which is most unsatisfactorily in-

*Sec. 138. Provided all the conditions before stated (secs. 124-127) (which are necessary to the trial of a pure experiment) be complied with, the symptoms, modifications, and changes of the health that are visible during the action of the medicine, depend upon that substance alone, and ought to be noted down as properly belonging to it, even if similar symptoms, occurring spontaneously, should have been experienced *a long time before* by the person on whom the experiment is made. The re-appearance of those symptoms, in the course of the experiment, only proves that in virtue of his own constitution this person has a special tendency to admit of their manifestation. In this case, they are the effects of the medicine, for it cannot be said that they came of themselves at a moment when a powerful medicinal agent exercised its sway over the entire organism.

definite), are the result of the drug under test. The inference may also be fairly drawn from this section, that other influences need not be seriously considered as possible causes of symptoms during a drug proving, because it is assumed that the "entire organism" is under the "sway" of "a powerful medicinal agent" at this time, and hence, any and all symptoms which appear during the proving are due entirely to the drug under test. Such an inference, it must be generally conceded, is harmful, because in a proving made in accordance therewith many symptoms may be accepted as drug results which are due to other causes, and, consequently, in constructing rules for future pathogenetic work the idea embodied in this section should be omitted, and in its place the necessity for eliminating all possible extraneous causes of symptoms during the drug test should be taught.

Section 141 teaches that the physician is best qualified of all persons for proving drugs. While this is undoubtedly true, the section is capable of doing harm in indiscriminately encouraging physicians to prove

drugs upon themselves, *knowing the substance they are testing*. This section should have contained the idea that no prover should know either the name or the nature of the drug under test (even though he be a physician), and that, though possibly physicians make the best provers, yet when they do prove drugs they should do so under the direction of some other physician. The purpose of such a precaution is to prevent either intentional or unintentional deception.

We find in Section 142 at least the semblance of authority for securing alleged pathogenetic symptoms from diseased persons. The section reads as follows: "But how the symptoms produced by a simple medicine can be distinguished among the symptoms of the original disease, even in those which mostly retain their identity, more especially chronic diseases, is an object for superior discernment, and to be left to the masters in observation."

While it is wise to provide for proving drugs upon persons who are not in perfect health, yet such experiments should be clas-

sified as strictly as circumstances will permit. In the foregoing section the symptoms obtained from persons suffering from positive disease states, are allowed to be classified with the symptoms obtained from those provers who are in the best of health; this is disorderly and unwise, even though done by "masters in observation."

The necessity for classification does not seem to be generally appreciated. In the provisions for future provings I would suggest, therefore, that instead of the idea found in this section, that rules be adopted classifying provers into groups according to the degree of health and pathological condition of the individuals, according to constitutional defects or vices, e. g., those suffering from derangement of the mucous membrane to be classed together, those having skin diseases to be classed together, those addicted to alcohol, tobacco and condiments, respectively, to be classed together, etc.

In concluding this subject of drug proving, Section 144 reads as follows: "A *materia medica* of this nature shall be free

from all conjecture, fiction, or gratuitous assertion—it shall contain nothing but the pure language of nature, the result of a careful and faithful research.” This section is capable of misleading, because, from what we have seen, though *all* the directions given in the *Organon* for proving drugs be strictly observed, we would not have a *materia medica* “free from all conjecture, fiction, or gratuitous assertion.” The rules laid down in the *Organon* leave too many opportunities for the assertion of the “personal equation,” to be productive of so perfect a piece of work as is suggested in Section 144, even if all experiments were conducted by the strictest of Hahnemannian ascetics.

The conclusion to be drawn from the foregoing argument is, that the proving of drugs by the average experimenters (and they have formed so large a majority that the small minority stands apart as a conspicuous exception), has deviated from the rules laid down by Hahnemann in his *Organon*, not merely at minor points, but vitally, and hence the failure to secure a *materia medica* “free from all conjecture, fiction, or gratui-

tous assertion," cannot be charged to deficiency in Hahnemann's rules, because these rules have not been strictly applied. At the same time we have also discovered that the Hahnemannian rules fall far short of, and differ vitally from, the requirements of "modern scientific research." This inefficiency, however, is not due to any lack of appreciation of requirements on the part of the founder of homoeopathy, but it is rather due to the fact that scientific research had not at the time of the formulation of these rules, evolved the present critical methods. Hahnemann made the most critically scientific rules possible at his time, and there is no reasonable doubt—to judge from his general breadth of thought—that were he now living, he would be the first to encourage this movement to purify the *materia medica*, because it is Hahnemannian in spirit.

CHAPTER X.

Critical Examination of Physiological Drug Tests:
The Method of the Baltimore Medical Investigation
Club.

One of the efforts of the minority of thinkers in the field of drug pathogenesis, was the publication in 1895 of a work entitled "A Pathogenetic Materia Medica." This was the result of about eight years of unremitting labor of the Medical Investigation Club of Baltimore, Maryland.

The book contains forty-seven presentations of drug effects constructed chiefly from the records to be found in the *Cyclopaedia of Drug Pathogenesis*. Some of these drug studies were published in medical periodicals from time to time prior to the issuance of the book, and created considerable discussion among materia medicists, because of the method of the construction of the studies. As a link in the chain of evolution in the progress of drug experimentation, this

method and its purposes may properly be considered at this juncture.

Preliminary to this consideration, however, attention is called to the fact that the bulk of symptoms recorded in the pharmacology of the homoeopathic school are subjective manifestations, a very small proportion being objective. This means, that in the work of constructing our symptomatologies there is the possibility of great scope having been allowed the imagination.

Accepting the validity of this proposition, the study of existing symptomatologies, from the standpoint of the work of the Club under discussion, may be separated into two subdivisions: First, a consideration of the application of psychological knowledge to the study of drug pathogenesis, and second, a consideration of the relation borne to such facts of science by the method of this Club.

In collecting records of supposed effects of drugs upon the approximately healthy, we must depend upon human testimony; just as we must depend upon human testimony for much other knowledge. In the knowledge of things pertaining to the cus-

tomary affairs of life, the testimony of ordinary human beings is usually sufficient for our guidance, after our judgment has passed a verdict upon the testimony rendered. The testimony given by the average person here suffices; but when we come to acquire critical knowledge on a given topic, knowledge upon which we feel we can depend without question, we are no longer satisfied to accept the testimony of random witnesses, but we apply to the specialist, the expert in the line of our researches. Even here we do not escape human testimony; but it is the testimony of the trained mind, expert testimony. In the majority of instances, unfortunately, however, even this testimony is based upon the evidence of the senses, rather than upon the judicial consideration of trained judgment.

In a series of articles published by the late Dr. George M. Beard in the *Popular Science Monthly*, in 1878, entitled "The Scientific Study of Human Testimony," is much food for reflection on this subject. In discussing the value of human testimony, he says, in a conversation with a gentleman:

"In science we never trust our senses." Dr. Beard intended to convey the idea that it is the perception of impressions made through our senses, upon which we cannot depend, rather than the idea that the senses themselves are so unreliable. He further says that "the opposing testimony of millions of non-experts, though concurring with and including the best and wisest of mankind, through all ages, being justly regarded as worse than worthless." Herein is a reason why clinical symptoms should not be accepted without caution, at least.

Although it is most difficult to define what constitutes an expert in any line, yet it is sufficiently correct and intelligible for our purpose to regard an expert as any one who is as thoroughly conversant with the *pros* and *cons* of his specialty as human limitations permit, and whose memory is sufficiently retentive in his special line of work to enable him to weigh the evidence and adopt the soundest conclusions consistent with the limitations of human judgment.*

*Dr. Beard's definition of an expert is: "An expert is one who can see all sides of a subject."

The process through which the expert conducts the observations of his senses, before forming his conclusions, therefore, justifies Dr. Beard's statement that "in science we never trust our senses," i. e., the uncriticised perception of our physical impressions.

Is this a new idea? To some it probably is; but it is because of this very trusting to the senses that we have so questionable a collection of drug pathogeneses.

Much has been written about the influence of the mind upon the body in its bearings upon therapeutics, but very little has been said on this subject in relation to the proving of drugs. The very men who are prompt to find the most decided manifestations of certain abnormal conditions dependent upon hysteria as a basis, and the difficulty of successfully treating such cases, do not seem to realize that the same tendency to nervous perversion is to be encountered in the drug experimenter, and its manifestations to be guarded against.

In studying this subject one cannot do better than to impress upon himself the following generalizations which have been

made with so much acumen by Dr. Tuke, in his work on the "Influence of the Mind Upon the Body":

"1. Thought strongly directed to any part tends to increase its vascularity, and consequently its sensibility. Associated with a powerful emotion, these effects are more strikingly shown. And, when not directed to any special part, an excited emotional condition induces a general sensitiveness to impressions—an intolerance of noise, for example, or cutaneous irritation.

"2. Thought strongly directed away from any part, especially when this is occasioned by emotion, lessens sensibility. As the vitality of the cerebral functions during deep intellectual operations excludes consciousness of the impressions made upon the sensory nerves generally, so an absorbing emotion effectually produces the same result.

"3. The emotions may cause sensations, either by directly exciting the sensory nerves and the central extremities of the nerves of sensation, or by inducing vascular changes in a certain part of the body, which excite the sensitive nerves at the peripheral terminations.

the method of the Medical Investigation Club removes the largest proportion of error and gives as a residuum more thoroughly systematized and more reliable results than any other method yet proposed for the work of purification of the *materia medica*.

2nd. The method applies without qualification to the pathogenetic symptomatologies upon which the majority of our *materia medica* text-books are based.

3rd. The method may be applied to the pathogenetic symptomatologies of the future—which it is fair to assume will be constructed with a preliminary physical examination and health record, etc.—for the purpose of securing the general sphere of action of the drug, and a condensed and reliable pathogenetic symptomatology.

4th. The original object of this method is to demonstrate the necessity for “a thorough and scientific re-testing of even our best-known drugs” upon approximately healthy men and women; and, secondly, to give pathogenetic verifications of pathogenetic symptoms, whether the method be ap-

plied to the pathogenetic symptomatologies now extant, or to the scientific pathogenetic deductions of the future.

5th. And finally, it would seem logical to conclude that this method of purifying pathogenetic symptomatology is qualified to fulfil the objects for which it was designed. Although its results may not be as prompt as some may desire, yet its application will secure more accurate and reliable pathogenetic drug effects in the future than our school has yet possessed.

It may be added that the motive which inspired the formulation of the plan upon which the work of the Club under consideration is based, was to show that much of the talk about the reliable sources of the symptomatology of our school, was simply cant, that a scientifically constructed *materia medica* was at least desirable, and, finally, that homoeopathic practitioners should do a little more thinking. The future only will reveal the value of this work.

kinds, and against chance and coincidence, and the result will be so free from the imaginative subjectivity of our old symptomatologies that, though the details may be curtailed to comparatively small limits, they will be reliable.

The method of the Baltimore Investigation Club, when applied to the pathogenetic work of the future, will be more for synthetic purposes than for analytical purposes. Analysis will be rendered superfluous if the strict methods of science are applied to the preparation of the material, for there will be little chance of noting a symptom which is not the result of the drug; personal peculiarities and idiosyncrasies will be eliminated by the preliminary tests. It will, in consequence, then, be fair to assume that even isolated symptoms will probably be reliable, and hence, all alleged pathogenetic details will be included in the records. The work of synthesis will then be applied simply for the purpose of reducing symptomatology to a form for immediate therapeutic use.

But even though all symptoms should in the future be admitted as probably reliable, there will always be a question whether isolated symptoms which occur in a large group of provers of a drug are not personal peculiarities independent of drug action. Here we broach a problem which has never been solved to the satisfaction even of the unthinking majority. The problem is the decision as to which is the wiser course in proving drugs, to regard each individual prover as a type, or to attempt a generalization of all the provers of a given group. There are advocates of each of these views, but the classification of provers into sub-groups according to temperament, habits, sex, etc., probably appeals more strongly to the humble student of science. This idea we find carried out to some extent in the *Cyclopaedia of Drug Pathogenesis*.

Finally, the following conclusions may be adopted:

1st. Pathogenetic drug symptomatology to be of practical utility must have eliminated from it all probable sources of error, and so far as a study of the subject reveals,

verified pathogenetic power of the majority of drugs which have been proved according to the unscientific ways of the past only. It is to the future we must look for a scientific pathogenetic *materia medica*. Such a collection of pathogeneses, we assume, will be secured in accordance with the strict methods of science, which includes the preliminary physical examination, the health record, the ignorance of the experimenter as to the drug under test, etc., etc., or they will not be secured at all.

The objection may also be raised to the method under discussion, that in accordance with this method a large number of pathogenetic verifications of symptoms are recorded that are not characteristic of any given drug, but are common to so many drugs, or else are common to many persons, independent of drug action; such symptoms, for example, as headache, vertigo, nausea, etc. The reply to this criticism is, that this is not the fault of the method, but of the material to which the plan has been applied. Had drugs been properly proved, all chance of the symptoms common to the normal con-

dition of many provers would have been excluded; and on the other hand, the exercise of common sense will correct the tendency to regard the generic symptoms of groups of analogous drugs as characteristic of any individual drug.

I have spoken of the Investigation Club method in its relation to the pathogeneses of the past; it is necessary, before concluding the subject, to consider the method in its relation to the pathogenetic symptomatologies of the future, in so far as we are able to judge of the character of these prospective symptomatologies. We will, however, assume them to be of the kind just suggested, i. e., symptomatologies which have been preceded by the physical examination and the health record, with all that this implies.

As has been said, this preliminary step in a proving will of necessity reduce to the minimum the six sources of error against which we must guard in all experiments with human beings; it will guard the experimenter against the probabilities of intentional or unintentional deception of all

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It may be objected that the work of the Baltimore Club is not satisfactory because it occasionally classes a reliable symptom with those that are unreliable. This brings up the question which has been asked more than once of late: Is it better to reject a large number of unreliable symptoms together with a few reliable ones, or retain all the unreliable symptoms for the sake of a few reliable ones, which would otherwise be rejected?

That I believe the method under consideration to be satisfactory in its results, makes clear my preference for reliable pathogenetic symptoms and places me with those who would rather sacrifice a few reliable symptoms, if by so doing we can rid our

materia medica of the mountains of rubbish, than retain these few grains of fact at the expense of keeping so much unreliable and confusing material.

Here again, comes a challenge to prove that such retained symptoms *are* reliable; but this is a task which neither I nor any other living man can accomplish. All that can be done with these pathogenetic symptomatologies of the past, is to rid them, as far as it is safe, of the *probable* errors contained, and then submit the result to the test of therapeutic application. At this point comes the question of doubt whether this will solve the problem; and, to confess the truth, I do not believe it will, when we remember that the question to be decided is whether or not the symptomatologies which have been constructed according to the Baltimore method, are really the result of drug action.

We know very little of "drug action"; we know almost nothing of the finer details of drug effects. The general sphere of action covers our positive knowledge of the

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The preparations of the drugs have their influence also. A weak tincture, an impure tablet or an adulterated trituration are stumbling-blocks in the way of the young practitioner's success, and may feed his skeptical tendency. Combination tablets are intended to lighten the labor of the active practitioner by furnishing him with therapeutic short-cuts; but in many instances they are mere laboratory productions, recommended for entirely theoretical reasons, without foundation in experience or in accord with any established therapeutic principle, and are, therefore, but poor substitutes for the carefully selected drug. In therapeutics, as in all other lines of work, the best results are attained and the greatest successes scored only after thorough knowledge of the subject, which must come through hard study. It may be safely asserted, however, that there would be fewer combination tablets were our knowledge of physiological drug effects more accurate.

It is presumed that our colleges, at this late day, provide their graduates with such knowledge of *materia medica* and therapeutics that no doubt of the healing powers of drugs will ever enter their minds; but things are not always as they seem. Even today there are in existence some accredited teachers who tell their students, and with straight faces, that *all* cures following drug administration—no matter what that drug may be, or what its dilution—are due to the law of similars, because, forsooth, cures result in no other way. These men also teach other things, some of which are not practical, and some are not true: e. g., that a hypodermic syringe is a good thing to leave at home; that such and such a case was carried through typhoid fever successfully by diluted drugs, when, in point of fact, a well-known coal-tar product in material doses was the chief drug used; that the “totality of symptoms” is a therapeutic necessity, when, as a point of fact, the teacher himself has never found such an impossibility, and knows it; and that the size of the dose makes no difference, if the drug be in-

do solely with the avowed practitioners of homoeopathy.

On scanning this field, several contributory reasons for this weakening faith become apparent, one of which is due to expecting too much of drugs. This over-sanguine expectation depends necessarily upon ignorance of just what we have a right to expect. As investigation has revealed more and more of the possibilities of tissue metamorphosis and growth, so have physicians come to a knowledge of the improbability of drugs effecting changes which in the more ignorant past were not only believed possible but probable. Certain morbid growths and conditions might be instanced as usually impossible of removal by other than mechanical means, such growths and conditions in former times having been confused with other somewhat similar morbid changes that really are amenable to drug influence, and which confusion even yet sometimes reacts to the detriment of therapeutics.

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means many conditions are remedied at once that in the past were treated more or less successfully by drugs. In some cases therapeutic failures have been succeeded by brilliant surgical successes; and under such circumstances it is but natural that, in proportion as faith in modern surgical methods is strengthened, so is faith in drug efficacy weakened. On the other hand, many cases of cures by drugs have been claimed by zealous therapists, but such cases have attracted far less attention than the flash of the surgeon's knife. The progress of surgery, therefore, may be credited as one of the contributory causes of modern weakening of faith in therapeutics.

"Of making many books there is no end." Especially does this apply to books of drugs; and such books as some of them are! Containing, as not a few of them do, many purely theoretical recommendations for the use of drugs, and which recommendations, when tried by the young therapist, fail utterly to fulfil their sponsor's promise, they have more or less effect upon the confidence of the beginner. Book-making is a responsi-

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In the present attitude of doubt of drugs, entertained by many, the foregoing principle aptly applies. The starting point is in the accurate knowledge of what drugs will do, the goal is the resulting cure of the patient, and the links connecting the starting point with the goal are constituted of a clear understanding of how to apply the knowledge to produce the cure. Given the knowledge and the method, the cure is more likely to result than if either the knowledge or the method of application be incorrect or in any way deficient.

It is safe to assume that physicians of to-day have less faith in the efficiency of drugs in the treatment of the sick than they possessed two or three decades ago. This means, either, that the knowledge of what drugs can do is not sufficiently accurate to satisfy the demands of the modern active practitioner, or that the methods of applying this knowledge are defective, or both; or it may further be considered whether or

not drugs are really capable of producing the cures that have been claimed for them.

The allegation that drugs have cured disease conditions is too well sustained by facts to need further investigation, and we are therefore left to the consideration of whether or not the cause of this modern defection be lack of correct systematized knowledge, or defective therapeutic methods; or, further, whether this lack of faith be confined to the indolent members of the profession and to undergraduates alone. We have only to read the current medical literature to find that doubters are among the thinkers of the profession, and we are therefore forced to the conclusion that there must be some real and serious defect to account for the lack of faith of the practitioner and the timidity of the applicant for State license.

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CHAPTER XI.

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This is an age of critical analysis, at the hands of which all things not founded in fact must suffer. As the enlightening influence of education extends among the masses of humanity, superstition and hollow pretense of all kinds must dwindle into nothingness, and hence, it becomes observable that the things pertaining to the healing of the sick, the foundations of which are apparently not in fact, are no longer treated with the respect and consideration which in the past was considered their due. Particularly is this true of much that was once deemed practical therapeutics. Questions have been asked to which answers have not yet been made, and doubts have arisen that have not only shaken the faith of the critic

in a part of the fabric, but which have made many men question the utility of all drug therapeutic measures beyond the simplest mechanical means. Certainly, for a number of years past, there has been abroad in the land a lack of faith in drugs. A careful study of the subject leads to the conclusion that an ignorance of just such points as have been treated in the preceding pages, may be credited with being some of the causes of such a decadence.

In any line of work the best results are secured only through systematizing the principles and facts upon which the work depends. Nothing has yet controverted the self-evident proposition that a straight line is the shortest distance between any two points. To reach a goal means the accomplishment of a purpose, and the accomplishment of a purpose means the establishment of a sequence of ideas, conditions, or things, which connect the start and the finish by the line of intent. To demonstrate this proposition of the straight line, however, it is essential that the exact location of both the starting point and the goal be known; and, once

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CHAPTER XI.

The Dark Hour Before Dawn: The Waning of Faith in Drugs; Some Reasons Therefor, and Some Remedial Suggestions.

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In any line of work the best results are secured only through systematizing the principles and facts upon which the work depends. Nothing has yet controverted the self-evident proposition that a straight line is the shortest distance between any two points. To reach a goal means the accomplishment of a purpose, and the accomplishment of a purpose means the establishment of a sequence of ideas, conditions, or things, which connect the start and the finish by the line of intent. To demonstrate this proposition of the straight line, however, it is essential that the exact location of both the starting point and the goal be known; and, once

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dicated. The many cures made by ferrum, calcium, magnesium, sodium, and the proximate principles of the body generally, are even now being taught as due to the law of similars, regardless of the amount in which these agents are given, and the nutritive needs of the organism for these very substances. The great law of hygiene, the law of demand and supply, the law of dissimilars, of contraries, is ignored, and the plastic mind of the student moulded into deformity. Such teachers are found alive in our colleges today, and are known by their faculties to teach such nonsensical and unreliable rubbish, and yet are allowed to promulgate such views. The inevitable result of such teachings is, in many instances, that the pupil, after futile attempts to demonstrate the truth of his collegiate instruction, ends by becoming a shining example of therapeutic pessimism. Is this remarkable?

A careful examination of usually accepted symptomatology text-books, inevitably brings to our attention the admixture of alleged effects of all-sized doses of drugs,

from massive doses of crude substance to high "potencies"; and, in addition, we also find an unclassified tangle of primary and secondary effects; all of which is certainly not qualified to give the student of drugs a very clear idea of the location and nature of his starting point in the therapeutic race. As to any objection being raised that the question of primary and secondary drug effects is too obscure to furnish material for intelligent discourse, we have but to meet the point by granting the objection as another reason for a lack of faith in drugs.

The knowledge that unconscious hypnosis is not infrequently responsible for the cure of the patient, and that, as already pointed out, the *vis medicatrix naturae* is a therapeutic power of no mean proportions, suggests to many skeptically inclined thinking men the possibility that the satisfactory cures apparently resulting from drugs may, after all, be due to one of the subtler influences. Here, therefore, is another contributory cause for weak faith in drug power.

Modern intelligent study of physiological drug action is in some instances another

potent factor in weakening faith in the curative possibilities of drugs. The reason why such study has sometimes resulted in this skepticism, is, that in the past much knowledge of drug action was imaginary, modern methods of investigation having proved this, but they have not yet been extended far enough to fully determine exactly how much or how little drugs really will do. In consequence, the skeptical physician does exactly what the average skeptical mind in all other walks of life does under similar circumstances; he doubts that there is any good in the whole because a part has proved faulty. This is one of the unavoidable results of progress. From implicit faith the pendulum-like mind has swung to the other extreme of pessimistic incredulity, and has not yet had time to reach the ultimate vertical "happy medium." Whether this last quiescence is desirable is a question.

The vast and child-like credulity of some of our early drug provers has to me for many years been a cause for regret. This spirit, unfortunately, has not yet all disappeared from our midst, but in some minds

it still finds harbor, together with some of the intolerance of the dark ages, in proportion to the narrowness of the mind, and out of all proportion to the progressive spirit of the times. Homoeopathy is not a theology, a religion, nor is it in any way a sentiment; it is simply a scientific fact. The inherited credulity of the past has been a positive hindrance to the acceptance of homoeopathy by many earnest, honest minds; and as long as this spirit of irrational credulity (that regards the honest searcher after facts as a heretic, or in any other light than as one with the right to examine all things and to have his wholesome doubts), shall sway minds in the profession, so will it assist in increasing the tendency to rampant skepticism that is now abroad. The poet Moore correctly characterizes this unreasoning state of the human mind when he says:

“But Faith, fanatic Faith, once wedded fast
To some dear falsehood, hugs it to the last.”

The vastness of the subject of materia medica precludes the possibility of students in pupilage becoming experts in this

branch; but were "the differences of opinion expressed in the same institution by different teachers" reconciled in their essentials, by a more critical and impartial study of pharmacology in general by these same teachers, the student might then be supplied with recitation text-books embodying the vital facts of materia medica to which no properly qualified teacher need take exception, and even in the limited time allowed by the college curriculum the student would present himself for his degree examination or his licentiate examination without undue apprehension of the result.

The foregoing may be regarded as some of the many causes which are responsible for much of the lack of faith in the efficacy of drugs to which our attention has been called; but probably the most potent of all causes is one which has not yet been mentioned, and which at the same time includes some of those named. I refer to a double cause—the absence of both a physiological standard of dosage, and of system in arranging drug effects. Our books are full of alleged drug effects which are supposed to

have been produced by a great variety of drug preparations. Even the most devout worshipper at the shrine of antiquity must acknowledge that a proving made with a toxic dose of a drug will not produce the same set of effects, at least in degree, that is alleged as resulting from the 10th or 12th decimal dilution, and yet some persons are so illogical as to accept records of mixed effects of all manner of drug preparations as properly indexing the characteristic effects of the given drug. Without doubt here is serious cause of offense.

After this very superficial review of so important a subject we are surprised at neither the lack of faith in drugs, nor in the timidity of candidates for medical degree or license. In fact, we may properly be surprised that so many persons still have sufficient confidence in their ability to practically apply such confused knowledge to the healing of the sick, than that so many doubt. In the light of facts, how is it possible for the average practitioner to have assurance of his ability to heal the sick *tuto, cito et jucunde*, without possessing a clearer

understanding of his working material than it appears is possible under these circumstances? As already stated, to reach the goal it is necessary to clearly locate the starting point and become familiar with its surroundings.

In brief, we find the following twelve causes for the lack of faith in the efficacy of drugs, to which attention has been called:

1. The expectation of too great therapeutic results from drugs, sometimes entertained by young practitioners.

2. The disproportionate progress of surgery, which, when contrasted with therapeutic progress, reacts against therapeutics.

3. The unreliable teachings of inexpert and self-constituted authorities.

4. Faulty preparation of drugs, and the influence of the combination tablet; which latter, however, may be regarded as an outgrowth of ignorance of physiological drug effects.

5. Erroneous teachings.

6. Unsystematized records of physiological drug experiments; alleged effects of all amounts and preparations of drug sub-

stance being mixed together with primary and secondary drug effects.

7. The different views concerning primary and secondary drug effects.

8. The knowledge that many cures result from the *vis medicatrix naturæ** and from unconscious hypnotism, even though drugs be administered at the same time.

9. The partial investigation of physiological drug effects. "A little knowledge is a dangerous thing."

10. Contradictory teachings in the same college.

11. Fanatical faith, and intolerance of the views of others.

12. The absence of a standard of physiological dosage, and the absence of all system for the arrangement of physiological drug effects.

These twelve causes for skepticism in therapeutics are some of them remediable; some of them are not. Whether they include all the reasons why men will not accept all optimistic things alleged of the

*That is, *independently* of the influence of the drug administered.

therapeutic powers of drugs, I do not know, and whether all pessimism would disappear from the medical profession were these causes eradicated, I am not prepared to say, but I believe much good would result if each one of us would do what it is in his power to do in this much-needed reform. Some things, however, will remain unchanged, even though doubt were no longer harbored by the most excursive spirit in our profession, and the physician should always bear the following facts in mind: The cure of the patient may result from, first, the unaided *vis medicatrix naturæ*; second, unrecognized hypnotic influence, and, third, the remedy prescribed. Any one of these influences may be the sole cause of the restoration of the patient to health, or the cure may result from a combination of these causes.

The physician must also further recognize that there are two laws of therapeutics; the law of similars and the law of dissimilars. Even Hippocrates in his ancient day was aware of this close resemblance and wide divergence upon which to found a study of therapeutics.

Materia medica always will be a difficult study, because the student is compelled to do a large amount of memorizing, but this is no reason why obstacles should be further added to the unavoidable difficulties by teaching false and irrational views.

Drugs will probably always be used as a means of healing the sick, and there will always be those who doubt drug efficiency, but much may be done to remove the disintegrating defects to which attention has been called. Give the average physician faith in his records of physiological drug effects and he will soon forget his skepticism. Strengthen the foundation, clear the starting point; this is the crying need.

It is unwise for us to jump to conclusions relative to the significance of the attitude of a large number of physicians as to the efficacy of drugs in sickness. Under the conditions noted, it is no great matter for surprise that serious doubt exists; and, further, under these same circumstances it is questionable whether this doubt is not wholesome. The medical profession has reached a stage of education and culture

which will in the future prevent the acceptance of theories, postulates and allegations unsupported by demonstrable fact, and the sooner we recognize this status of the medical mind and strive to unite with the progressive trend, the better will it be for the future evolution of truth. To maintain its proper place in the development of the human race, medicine must progress. It can never be a completed science nor a perfected art, though it may attain and hold the dignity pertaining to all approximate sciences and arts. Types of men change, the pathology of one century is not that of another, and therapeutics must of necessity progress *pari passu* with all other advances.

CHAPTER XII.

Some Signs of the Dawn: The Application of the Primary Effects of Belladonna, Hyoscyamus, Stramonium, Nux Vomica, and Ignatia, in Accordance with the Two Therapeutic Laws.

This waning of faith in drugs will not be permanent, the causes of the defection are being removed. Pathogenetic, or physiological, drug effects are being more clearly understood; especially are homoeopathic practitioners no longer satisfied with the inexperienced tests that have been made with drugs in impotently small doses in the past, but they are demanding positive, demonstrable drug effects as a basis for the *materia medica* of the future, and as material with which to secure more certain therapeutic results.

The critical analysis of the character of pathogenetic material of the past, and the cry for more reliable drug experimentation, have not been in vain, as is evidenced in the work recently done under the auspices of

the Ophthalmological, Otological and Laryngological Society of the American Institute of Homoeopathy.

In his presidential address before the last named Society, in 1900, Dr. H. P. Bellows discussed the subject of instituting re-proving of the *materia medica*. His suggestions met with the approval of the Society named, and also of the parent body, and as a result during the years 1902 and 1903 a large number of drug experiments were made under the supervision of Dr. Bellows (assisted by physicians throughout the United States), in accordance with "the methods and precautions of modern scientific research." This, of course, included a preliminary physical examination and a preliminary health record of the experimenters, and also the ignorance of both the sub-conductors and the experimenters of the character of the drug under test. In every instance material, and in some instances massive, doses were used.

Following these tests, Dr. Bellows submitted to the American Institute of Homoeopathy, at its annual meeting in 1903, a plan

for the organization of an institution for drug pathogenetic experimentation. The plan was well considered and clearly stated in all its details, received with enthusiasm by the members of the Institute, and taken into consideration for some definite action at the next annual meeting.

In his plan Dr. Bellows has followed the suggestions offered by the late Dr. J. P. Dake, and somewhat more fully outlined in the preceding pages of this book, elaborating details, however, to an extent undreamed twenty years ago, but of a nature so practicable that it merely remains to endow the proposed institution with sufficient funds to properly execute the plans. When this is done, as no doubt it will be sooner or later, and a large number of pathogenetic experiments have been made with drugs, the workers in this field will find a most important problem confronting them, which will be the proper classification of the primary and the secondary effects of the drugs tested. This will no doubt be systematically and satisfactorily done.

Having stated a number of views relative to physiological drug action, and the principles upon which drugs may be applied for "the greatest good to the patient," and having called attention to the need of securing more reliable work in pharmacodynamics, it is not irrelevant to submit some examples of how drugs may be studied with a view to their practical application in accordance with the two laws of therapeutics. For that purpose two groups of drugs have been selected as well adapted to illustrate not only these laws, but also to show the possibility of at least approximating a disentanglement of the primary and secondary effects of drugs. Had these drugs been proved in accordance with the method of experimentation outlined in these pages, no doubt more definite and satisfactory results might have been produced in the following studies. As it is, however, the best material at command has been utilized, all the principal *materia medica* writers laid under contribution, and results secured, it may be hoped, which are approximately correct, or at least suggestive. The two groups of

drugs selected are, first, that typical trio from the solanaceæ, belladonna, hyoscyamus and stramonium, and second, the characteristic representatives of the strychnia group, nux vomica and ignatia.

ATROPA BELLADONNA.

Physiological Action.

The effect of an average physiological dose of belladonna, when given to the healthy human being, depends almost entirely upon the attitude it causes the nervous system to assume. "The motor power of the heart is increased in activity, and the inhibiting control is lessened." (Bartholow.) "The force of the heart's beat is also increased. Coincident with this, and as a result of its action upon the blood-vessels, arterial tension is increased. In toxic doses, however, blood-pressure is reduced." (Shoemaker.) Butler states that, "Medicinal doses of atropine or belladonna at first retard the pulse, but it is quickly accelerated and rendered firmer, with increased arterial pressure. The primary transitory action is due

to a slight stimulation of the vagi roots, the subsequent quickening of the pulse resulting from paralysis of the peripheral ends of the pneumogastric nerve distributed to the cardiac muscle. The inhibition being thus removed, the heart responds to the influence of the accelerator nerves." From this it may safely be concluded that the action of belladonna is without doubt primarily stimulant, although a superficial view would suggest its primary depressing effect upon the heart.

The increased arterial tension is due to two causes: first, the greater rapidity and force of heart action, and, second, the contraction of the arterioles due to stimulation of the vaso-motor center.

Large doses of belladonna may completely overwhelm the heart through exhaustion of both nerve supply and muscle fibre.

With increased cardiac action there is rapid respiration, together with elevation of temperature. This rise in temperature may be from $1\frac{1}{2}^{\circ}$ to 1° Fahrenheit, and continues only during the primary effect, of course, falling as the blood pressure is reduced.

Because of the strong action of belladonna upon the nervous system and the circulation, a sense of fulness of the head exists, vertigo is present, there is pain, especially in the forehead, the face is flushed, the pupils are dilated, with resulting impairment of vision, which is sometimes expressed as cloudiness, diplopia, or even vision of colors, and the external envelop of the eye being involved there is congestion of the conjunctiva.

The mucous membranes of the mouth and throat become dry, with a sense of contradiction in the latter, and dysphagia. A scraping sensation in the throat may also be present, the tongue becomes difficult of management from involvement of the motor nerves, and from extension of congestion to the vocal cords there is hoarseness.

Nausea and inclination to vomit are present. The secretions of the intestinal tract, as is the case with other glandular structures, are all diminished or suppressed, e. g., the salivary glands' secretion, the secretions of the stomach, the liver, the pancreas and the general succus intestinalis. Intestinal peristalsis is, on the other hand, stimulated

by the same dose that will check the secretions. These conditions are brought about by the action of the drug upon the nervous system, of course, the nerve ganglia in the walls of the intestine being stimulated, and in the case of the suppressed secretions the function of the nerve-endings is inhibited.

Owing to irritation of the vesical mucous membrane there is tenesmus. The kidneys also feel the influence of the action of belladonna upon the vaso-motor nerves; the quantity of urine is increased "as a result if arterial tension, but there is no increase in the solid constituents of the urine." (Shoemaker.)

Another very decided action of belladonna is upon the brain. From the sanguineous congestion, and also from the specific action of the drug upon nerve tissue, there is the highest degree of mental activity, evidenced in delirium. This may be "gay and laughing, or noisy, the patient being incessantly occupied with a single object or idea; or it may be noisy and furious, the patient fighting and striking all who approach. In lethal doses convulsions may occur, or profound

stupor may result after a period of delirious excitement." (Bartholow.)

The general skin of the body may assume a red appearance closely resembling the rash of scarlatina, and even desquamation may follow. This is due, according to Shoemaker, to the action of the drug as a stimulant upon the "sympathetic system."

From the foregoing, it may be concluded that in the usual physiological doses belladonna is primarily a stimulant of organic function, and secondarily a depressant.

THERAPEUTICS.

The uses to which belladonna is put are quite numerous, and in some of these uses the principle of similars and in some the principle of dissimilars is demonstrated by the physiological dose of the drug.

In *pain of neuralgic origin* occurring about the head, belladonna is frequently useful, and the principle of therapeutic action is that of similars. Where the drug is used, however, merely to deaden pain generally, whether due to *rheumatism*, or *gout*, or

to simple *myalgia*, the action is that of an anodyne, and the principle is that of dissimilars. The various conditions to which this applies may be noted as *cardialgia*, *dysmenorrhoea*, *pleurodynia*, *lumbago*, *sciatica*, and even *angina pectoris*.

The local use of the drug in such conditions as *toothache*, and the pains of *cancer*, succeeds in giving relief in accordance with the law of dissimilars.

Lead colic, and also simple *nervous colic*, are relieved by the action of belladonna in causing a stimulation of the peristaltic muscles, thus rendering the drug antipathic to these conditions; for as has been stated in the brief consideration given to the physiological action of this drug, belladonna will stimulate peristalsis. Normal intestinal action being thus established the paroxysm of pain will subside.

In *rigidity of the os uteri* during labor, belladonna ointment is sometimes applied to cause relaxation; results following obviously in accordance with antipathy. So in *spasmodic stricture of the urethra* or of the *rectum*.

In cases of *kidney colic* or *gall stone colic*, when the drug is used to cause relaxation of the given canal, no therapeutic principle is applied, for the ureter of the gall duct, as the case may be, is presumably in normal condition, and, consequently, belladonna is simply used to produce mechanical dilatation and not to overcome the opposite condition of constriction such as exists in the case of either stricture of the urethra or rectum. This is also true in the case of *strangulated hernia*; no therapeutic principle being involved.

In *chordee* the relaxation due to belladonna is owing to the antipathic relationship of the drug. This is also true of *nocturnal enuresis* due to spasmodic contraction of the bladder.

The local use of belladonna in painful *haemorrhoids* owes whatever relief may be obtained, to the antipathic relation of the drug to the hypersensitive state of the nerves of the part involved.

The quieting influence of belladonna in *general convulsions* and *convulsions of groups of muscles*, is doubtless due to the

antipathic relationship. This is also true of *torticollis* and *muscular cramps*.

Spasmodic asthma responds to the use of belladonna also because of the relaxing effect of the drug upon the bronchial muscles, and, consequently, the antipathic law is responsible. The same may be said of the principle underlying the relaxation caused by the drug in *laryngismus stridulus*, and in *hiccough*.

For the purpose of paralyzing the cardiac inhibitory nerve termination, thus overcoming slow heart action, in *bradycardia*, for example, the sixtieth of a grain of atropine is sometimes used, antipathy being responsible for the result in such cases. The use of the drug for the purpose of stimulating the heart prior to anaesthesia, has no relation to any therapeutic law, unless the heart be abnormally slow or weak; in that case the principle just noted may be credited with the stimulant effect.

Belladonna has been recommended by Brown-Sequard for *paralysis of the spinal cord*. Here the action of the drug is undoubtedly that of a stimulant, and the law of dis-

similars explains the result following, if there be any.

The use of *belladonna* as a *mydriatic* has no relation to any therapeutic law, unless it be given to cause dilatation of a pathologically contracted pupil, in which case the response is in accordance with the law of dissimilars. In the former case it is a mere mechanical action similar to that of relaxation of the ureter, or os uteri, or gall duct, already mentioned.

In *ptyalism*, either during pregnancy or from mercurialism, the relief caused by *belladonna* depends upon the law of antipathy. Exception may be taken to this statement in relation to mercurialism, but I see no reason why the relationship between drugs and natural pathological conditions, and drugs and other drug pathological conditions should not be regarded as identical. I have found no good reason for making flesh of one of these relationships and fish of another, and until some good reason is advanced there is nothing to prevent such a conclusion.

The same law explains the relationship between belladonna and the checking of excessive *mammary gland secretion*, the *night sweats of phthisis*, the discharge of *bronchitis*, *colliquative diarrhoea*, *acute coryza*, etc. It might be mentioned that, according to Hare, the action of the drug in diarrhoea is due to the stimulation of "the splanchnic vaso-motor filaments of the intestinal blood vessels, which, being inactive, permit a transudation of liquid into the bowel."

Erysipelas, *boils* and *carbuncles*, *inflamed chilblains* and other local cutaneous inflammations are sometimes relieved by the internal administration of belladonna. If it is true, as Shoemaker asserts, that the action of belladonna upon the skin is due to its stimulant influence upon the sympathetic nervous system, then the therapeutic relationship between the conditions noted and belladonna is that of similars. It is also the case with *acute inflammations of the mucous membranes of the air passages*; for here the primary effect of belladonna is a similar dry condition. The drug, however, is antipathic

to the next stage, that of discharge, as has already been mentioned.

In ordinary *sore throat*, the same of the two stages is true.

In *aphonia from fatigue of the vocal cords*, belladonna gives relief in accordance with the law of similars.

In the early, dry stage of *pneumonia*, belladonna bears a homoeopathic relation to the disease. It is the same in *iritis* and in *acute nephritis*. So with *inflammation and induration of the mammary glands*.

As already stated, belladonna is sometimes given to arouse a flagging heart, and the fact that its action is due to the stimulant influence of the drug makes it obvious that the therapeutic relationship is here that of dissimilars. On the other hand, when belladonna is given in a febrile condition, in which the heart's action is too rapid, and in which there is the accompanying elevation of bodily temperature, the therapeutic relationship must just as obviously be that of similars. For example, *scarlatina*. Here we have not only the elevated temperature

and the rapid heart action, but in addition there is the dry, inflamed throat, and the cutaneous involvement; all of which conditions strongly resemble the primary effects of belladonna.

With these facts before us, there is ample justification for accepting the belief that the *prophylactic power* of belladonna against scarlatina is due to the relationship of similars. That belladonna has this power is now generally recognized as a fact by all schools of physicians. On this point Phillips, twenty-three years ago, wrote: "The mooted question as to the prophylactic power of belladonna in scarlatina has given rise to much discussion and also to some careful and thorough investigations. When Hahnemann first asserted this power, but five years had elapsed since the publication of his peculiar ideas concerning the remedial action of drugs. Nevertheless, so strong was the feeling against him that his statements in this connection were almost unheeded, and little effort was made either to confirm or refute this pretended discovery, so important, if true. Hufeland was one of the

first to examine the question experimentally, and as a result gave his adhesion to the affirmative view. Since then much evidence has been collected on the subject, and the preponderance is certainly in the same direction."

In *typhoid* and *typhus fevers*, Graves says, "belladonna is indicated when there is much low, muttering delirium, subsultus, and stupor, and is contraindicated in the condition of delirium ferox." The drug is here given to stimulate the patient, and is of necessity antipathic to the disease condition; but there is a condition which sometimes develops during typhoid fever, in which the patient suffers from an elevated temperature, rapid heart action, dilated pupils, flushed face, and other appearances similar to those to be found among the primary effects of belladonna. In such a condition the relationship between the patient and the drug is certainly that of similars. Under such circumstances, however, it is not always wise to use full physiological doses of the drug, simply because the patient is here often more susceptible to drug influence in

general than the healthy experimenter from whom similar pathogenetic symptoms have been obtained; a dose of one-tenth or even one-hundredth strength sometimes being equivalent for therapeutic purposes to a full dose of the drug in the healthy experimenter. The difference being caused, as must be obvious, by the heightened sensibility of the patient.

Bartholow calls attention to the use of belladonna in *diphtheria*, especially when given in the early stage of exudation. Here the drug undoubtedly acts in accordance with the law of similars, inasmuch as it produces just such an inflamed throat as is present in some cases of diphtheria. While the drug probably has no effect whatever upon the bacillus, or even the fibrinous exudation, it subdues the inflammation and thus favors a restoration to normal conditions.

Ordinary sore throat, according to Phillips, with dysphagia, "fever, pain, redness, and swelling of the tonsils," is controlled by 5 drop doses of belladonna repeated once in from 1 to 3 hours. Of course, the therapeutic law here responsible for the beneficial effects is that of similars.

In various kinds of *mental disorders* belladonna is prescribed when the following indications are present: "Prostration, low state of arterial tension, languid intra-cranial circulation, a contracted pupil, and insomnia." (Bartholow.) Here, the physiological dose of the drug is antipathic.

Inflammation of the brain and spinal cord, from violence, sometimes finds a remedy in belladonna. In such conditions I would consider the relationship between the pathological state and the pathogenesis of the drug to be homoeopathic. Such a relationship is doubtless also responsible for the relief given by the drug in *delirium tremens*, especially when there is decided congestion of the brain, as is frequently the case.

In *nocturnal epilepsy* and in *petit mal*, "in pale, delicate and anæmic subjects, with cold hands and feet, blue skin and weak heart," belladonna acts as a stimulant, hence bearing an antipathic relationship to the condition.

In *constipation*, and even in *obstruction of the bowels* from impaction, where the mus-

cular tone is impaired or lost, belladonna may be used to restore this lost tone, and thus lay under contribution the law of similars.

In recent cases of *catarrh of the bladder*, the beneficial effect of the drug may be referred to the law of similars. The question may here be properly raised as to whether a drug may act in accordance with both laws of therapeutics at the same time in the same individual. I would answer unhesitatingly in the affirmative. For example, in a case of acute catarrh of the bladder with sufficient irritability to cause a spasmodic contraction of the sphincter vesicae. Here the inflamed condition of the mucous membrane is similar to the inflammation of the mucous membrane caused by a physiological dose of belladonna in the healthy, but the muscular contraction is opposite to the relaxation of the sphincter which is caused by the same dose of the drug. In such a condition as is above indicated, the cure may result through the quieting of the inflammation and the relaxation of the abnormally contracted sphincter; in the first instance the law of

similars being the relationship, and in the second the law of dissimilars being responsible for the relief.

As an hypnotic in *insanity*, I would regard the relationship between the condition of the patient and the physiological action of the drug as homoeopathic. A close resemblance here exists between the delirium of the drug and the mental perturbation; the cerebral congestion under such circumstances also resembling the congestion producible by belladonna in the healthy.

In *collapse* the therapeutic relationship between the drug and the condition it relieves is that of dissimilars.

HYOSCYAMUS.

PHYSIOLOGICAL ACTION.

The trio, belladonna, hyoscyamus and stramonium are frequently considered together as too closely alike in their effects to merit separate consideration. Belladonna may be considered the type of this little group, the members of which derive their pathogenetic similarity largely from the al-

kaloid atropine, which they all contain in greater or less quantity; their differences being caused by other alkaloids.

“Stimulation of the Central Nervous System, followed by depression,” is the manner in which Cushny characterizes the general effects of these three closely related synergists.

“According to the elaborate experiments of Laurent,” writes H. C. Wood, “hyoscyamus acts very similarly to belladonna upon the circulation, the respiration, the nervous system, the muscles, and the intestines.”

Both belladonna and hyoscyamus cause delirium, but the delirium of the latter is due less to hyperaemia than to direct influence upon the nerve tissue.

Shoemaker says: “The effects of hyoscyamus are similar to those of belladonna and stramonium, but it is more calmative and less irritant.” This superior quieting and depressing quality is due to the hyoscyne contained in hyoscyamus, and which, when given in maximum physiological doses acts as an hypnotic. Dr. H. C. Wood calls attention to Dr. Harley’s experiments, which

“seem to show that in some individuals hyoscyamus induces insomnia.” This may be due to one of two causes, either the size of the dose or the hypersensitiveness of the experimenter. And this suggestion of the stimulant action of small doses of hyoscine is further called to the attention of the profession by Sajous, when he says that “a small amount of hyoscine may not act as a hypnotic but as an excitant.” This is still further corroborated by the more positive assertion of Potter, who says, “that when hyoscine is given in small doses it must not be forgotten that it does not act as an hypnotic, but, as an excitant of cerebral action.”

This hypnotic effect is also due in part to the hyoscyamine contained in hyoscyamus, for, as Bartholow remarks, “Hyoscyamine has somewhat less than atropine of the deliriant action and much more hypnotic effects.”

Hyoscyamus also contains a certain amount of daturine, and this, together with the hyoscyamine, acts upon the sympathetic nervous system, in moderate doses, “stimulating the vaso-motor fibres and raising the

arterial tension.” They also cause increased peristalsis.

Harley’s observation that the primary slowing of the pulse is more marked after the administration of a moderate dose of hyoscyamus than after an equivalent dose of belladonna, is doubtless due to the greater stimulating influence of the contained hyoscine over the inhibitory nerve supply than that of atropine.

Another detail wherein hyoscyamus closely resembles belladonna in its action, is the scarlatiniform rash caused by the former. This is not as marked as in belladonna, nor is it accompanied by the elevated temperature which renders belladonna more applicable to scarlet fever than hyoscyamus.

From the foregoing, corroborated by personal observation, it may be concluded that hyoscyamus in moderate therapeutic doses, short of enough to cause hypnosis, is primarily a stimulant of the nervous system; but when given in sufficient doses to produce hypnotic effect, it is primarily not a stimulant but a depressant.

THERAPEUTICS.

In *insomnia*, due to an excited condition of the nervous system, hyoscyamus sometimes gives relief in small doses. Under such circumstances the principle involved is that of similars. On the other hand, when doses of from one to two drachms are given for hypnotic effect, the law of dissimilars is demonstrated. The same may be said of *great mental excitement*; small doses being homoeopathic and large doses antipathic to such conditions.

Irritability of the bladder, causing vesical tenesmus, is sometimes relieved by moderate doses of hyoscyamus. In such instances both therapeutic laws are laid under contribution, strange as it may seem. Hyoscyamus is certainly homoeopathic to the irritated condition of the mucous membrane, and it is as certainly antipathic to the contracted condition of the sphincter of the bladder. Irritability with tenesmus may also be caused by *stone* in the bladder, or by an *enlarged prostate*, and hyoscyamus will also give temporary relief in such cases.

In *cardiac valvular disease* when the action of the heart is irregular and tumultuous, hyoscyamus in moderate non-hypnotic doses will sometimes quiet the tumult through its stimulant action upon the inhibitory nerve, thus illustrating the law of dissimilars.

In *intestinal colic* the stimulant action of the drug upon peristalsis is in accordance with the law of dissimilars, as it is in the case of belladonna. The same may be said of the use of hyoscyamus in *constipation*; but when the drug is used to modify the drastic effects of purgatives, the modification of the over action is due to the similar relationship between the stimulant effect of hyoscyamus and the action of the drastics. If, on the other hand, hyoscyamus should be given in full narcotic doses, the principle is that of dissimilars.

The use of hyoscyamus in *all kinds of delirium*, whether due to fever, insanity, or to alcohol, may be in accordance with either therapeutic law, according to the amount used, a full dose illustrating the law of dissimilars and a small dose the law of similars.

Irritative cough, due to hypersensitiveness of the nervous system, or dryness of the mucous membrane, sometimes yields to medium doses of hyoscyamus in accordance with the principle of similars; and when the uvula is relaxed the benefit derived is doubtless also due to the same therapeutic principle.

Asthma is doubtless relieved by this drug in large doses in the same manner as such results are produced by belladonna, i. e., by relaxing the bronchial muscles; the principle involved being that of dissimilars.

Whooping cough is relieved antipathically by the antispasmodic dose of hyoscyamus. The same may also be said of the action of moderate physiological doses of the drug in *chorea* and *hysterical convulsions*, *dysmenorrhoea*, and I believe also *neuralgia* in general.

Chronic mania and delusional insanity, when relieved by doses of hyoscyamus short of hypnosis, owe the relief given to the law of similars, but when hypnotic doses are prescribed the law involved is that of dissimilars.

“Hyoscyamus excels belladonna and stramonium in hypnotic effect, and is consequently useful when a remedy of this character is required by children, by whom it is borne remarkably well.” (Shoemaker.) Here the law of dissimilars is obviously responsible for results.

Paralysis agitans yields temporarily to depressant doses of hyoscyamus, and in accordance with the law of dissimilars.

STRAMONIUM.

PHYSIOLOGICAL ACTION.

All observers of the primary action of moderate physiological doses of stramonium agree substantially that its effects are almost identical with those of belladonna. Butler sums up the characteristic differences between these two drugs as follows: “The action of stramonium is almost identical with that of belladonna, the main difference being the influence of stramonium upon the sympathetic nervous system, the motor and sensory nerves being less powerfully affected than by belladonna. Stramo-

nium is more apt to occasion irregular action of the heart, and the involuntary muscle-fibres of the bronchial tubes are relaxed more by stramonium than by belladonna. It usually occasions more delirium and is more aphrodisiac than belladonna.”

THERAPEUTICS.

The fact that stramonium acts more powerfully upon the sympathetic nervous system than belladonna should always be remembered when prescribing the former, and because of this fact the two drugs should not be used interchangeably.

Stramonium has been prescribed with more or less success for *neuralgia*, *rheumatism*, *gout*, *sciatica*, *enteralgia*, and all other painful conditions, and the narcotic doses given to produce effects act in accordance with the law of dissimilars. On the other hand, however, should relief come from the smaller therapeutic doses from which general stimulant action results, it is probably the law of similars upon which relief depends.

One of the most common uses of stramonium is the palliation of *spasmodic asthma*. Because of the more powerful relaxing effect upon the bronchial muscles, stramonium is now used almost entirely to the exclusion of belladonna in this malady. The leaves are smoked in the form of cigarettes, and the paroxysm thereby cured for the time, or at least very much modified. The various asthma cures so largely advertised usually contain more or less stramonium. In this difficulty stramonium is not curative, but merely acts as a palliative, the principle of its action being that of antipathy.

As moderate physiological doses of stramonium have a perverting influence upon the mind, so in all conditions characterized by mental disturbance resembling the effects of such doses, the relief obtained from stramonium in similar doses may be regarded as due to a greater or less degree of similarity between the pathological condition and the physiological action of the drug. Among such conditions may be noted *simple mania*, *puerperal mania*, *cerebral typhoid*, etc.

As an aphrodisiac effect is sometimes caused by stramonium when given in moderate physiological doses, so may the relationship between such pathogenetic effect of stramonium and *nymphomania* be regarded as homoeopathic from a double standpoint, that of both the mind and the sexual system.

Of *puerperal mania* Phillips says: "When the delirium is of a wild and furious but intermittent character, attended by great restlessness, with sluggishness and scantiness in the secretion of milk, and when there is a tendency to suicide, or a disposition to destroy the child. Stramonium, under such circumstances, will often allay the cerebral excitement, and soothe the nervous system." As stramonium in moderate physiological doses will over-stimulate the nervous system, it may be regarded as more or less homoeopathic to all inco-ordinated states of the nervous system, when given in equal or smaller doses for such conditions. Illustrations may be noted in *whooping cough*, *chorea*, etc. *Tetanus* may also be regarded in the same light, although stramonium may not produce fully developed tetanus, yet an un-

doubted tendency to cause a condition closely resembling tetanus may be noted in some of the records of poisonings.

In *delirium tremens* the similarity between the pathological condition and the primary effects of moderate doses of the drug is striking. If, however, stramonium be given in narcotic doses to quiet delirium, whether due to alcohol or any other cause, the law of dissimilars explains the palliation resulting.

The drug has been recommended in *catalepsy*, and the therapeutic relationship here existing is probably that of dissimilars.

To *epilepsy* stramonium probably bears a homoeopathic relationship when given in the usual moderate, stimulant physiological doses.

The pain of *dysmenorrhoea* may be relieved by stramonium when given in narcotic doses, according to the principle of dissimilars.

In doses large enough to produce narcosis, as suggested by Phillips, stramonium is antipathic to *rabies*.. In moderate doses, however, it is certainly homoeopathic, the sim-

ilarity extending even to throat congestion and dysphagia.

Sometimes stramonium is useful in *spasmodic cough*. The relationship here is antipathic when the drug is given in the larger physiological doses, as has been suggested in similar conditions under hyoscyamus.

In such congestive troubles as *erysipelas* and *scarlatina*, stramonium may be useful. This is especially the case when the brain is involved and furious delirium is present. Under these circumstances the similarity between the effects of stimulant physiological doses of the drug and the pathological condition, suggests the law of similars as the therapeutic relationship upon which relief depends.

STRYCHNINE.

PHYSIOLOGICAL ACTION.

Of the spinal stimulants the two which typify the class are *nux vomica* and *ignatia amara*. The close resemblance between these two drugs is due largely to the strychnine they contain. From the standpoint of sim-

ple stimulation, the alkaloid strychnine alone is considered by many pharmacologists, and for the purpose of studying the very close relationship existing between *nux vomica* and *ignatia* there is probably no better way than by examining the effects of this active principle.

Strychnine is a stimulant to the digestive functions generally, increasing the appetite and the secretions. It also stimulates the vaso-motor centres, the heart and the respiratory centre. "Peristalsis is increased and the bowels are somewhat loosened." (Shoemaker.) It is not upon the periphery that strychnine acts, but the nerve centres are attacked, and from this central involvement results follow.

When large doses are given convulsions supervene, and through all the disturbance the intellect remains unclouded, and consequently the suffering is intense. Of course, when asphyxia results from interference in respiration, unconsciousness may result, but this last is not due to the direct action of the drug.

Involvement of the voluntary muscles is not due to the action of strychnine on muscle fibre, but to the influence upon the nerve centres.

Owing to the stimulating effect upon the heart, the pulse increases in rapidity, and this despite the resistance offered by the stimulated vaso-motor centre. This is simply an illustration of one stimulated apparatus overcoming another stimulated apparatus, the drug undoubtedly acting as a stimulant to both vaso-motor and cardiac accelerator centres.

“Under therapeutic doses the temperature is slightly raised, owing to increased oxidation, as shown by the increase of urea and carbon dioxide eliminated and the oxygen taken in.” (Butler.)

All the nerve centres have their excitability increased by strychnine, and, consequently, we find the experimenter hypersensitive to impressions of all kinds, e. g., hearing is intensified, vision rendered more acute and touch is so sensitive that even a breath of air will precipitate a convulsion in one who has taken a toxic dose. All this is due

to the stimulant effect of strychnine. Although vision is rendered more acute than normal, yet the pupils are dilated.

“When taken in quantities just sufficient to produce sensible physiological effects, strychnine in man induces a feeling of restlessness, perhaps accompanied by tremblings in the limbs and some stiffness in the neck and jaws. When a somewhat larger amount has been taken, there may be general muscular twitchings and startings, with stiffness and stricture of the throat and chest; formications or abnormal sensations under the skin may or may not be present.” (H. C. Wood.)

The foregoing effects of strychnine are common to both *nux vomica* and *ignatia*. Besides strychnine, these drugs contain another alkaloid, brucine, and an acid, igasuric acid; but the difference in the proportions of these ingredients in the two drugs makes so little difference in the physiological action of the standard physiological doses that a large majority of the text-books on materia medica do not attempt to differentiate *nux vomica* and *ignatia* in therapeu-

tic application. Shoemaker says of *ignatia* : "The medicinal uses are the same as those of *nux vomica*, except that the dose should be smaller. *Ignatia* is employed almost exclusively for the preparation of the alkaloïds." On the other hand, Phillips says: "St. Ignatius bean contains a much larger amount of strychnia than the strychnos *nux vomica*, yet its effects are not identical with, though somewhat similar to, those of the latter." Phillips further remarks: "There is a very decided difference between the finer effects of *ignatia* and *nux vomica* that is not explainable by the results of chemical analysis; comparative clinical experience, however, will quickly demonstrate this to the careful observer. The two drugs are by no means interchangeable." As this writer seems to stand alone in his insistence upon the separate individuality of *nux vomica* and *ignatia*, it may be suspected that his early instruction in homoeopathic views may have had something to do with his position in this matter of individuality. This opinion is sustained by the fact that the only experiments with *ignatia* made for the pur-

pose of eliciting its individual characteristic effects, so far as I am aware, were made by Hahnemann, Jörg, Gross, Bergius, Camelli, and a few others whose observations have been utilized by the practitioners of homoeopathy. It is from these experiments, together with the recorded clinical observations of practitioners of homoeopathy, that the therapeutic uses of *ignatia* have been differentiated from *nux vomica*. The preference for *ignatia* in derangements of the nervous and digestive systems of women, with the concomitant "sensation as of a ball rising to the throat," and "the acute pain in the head, as if a nail were being driven into it," to which Phillips refers as indications for its use, are derived entirely from the sources above noted; and, while some excellent therapeutic results may be obtained by applying these indications, as my experience has corroborated, yet as a basis for a study of demonstrable primary effects of physiological doses of *ignatia* these records are of little value.

THERAPEUTICS OF NUX VOMICA.

“In nervous disorder of the gastric sensibility, connected with debility of the stomach, it is decidedly indicated, and has been found highly beneficial. Hence, its use in *pyrosis*, and that most painful affection denominated *gastralgia* or *gastrodynia*.” (G. B. Wood.) Here *nux vomica* in tonic doses is antipathic. In similar doses it is also antipathic to *constipation*, when due to torpor of the peristaltic muscles. In fact in all conditions due to debility of the intestinal tract, *nux vomica* acts in accordance with the law of dissimilars when given in the usual tonic doses. Some affections as *enteralgia*, *nervous colic*, and *lead colic*, with the usual constipation and flatulence due to peristaltic torpor, may also be included. In such conditions, however, in which one can be sure the constipation is due to irregular peristalsis, or in which it depends upon “constriction in the descending colon,”—which, according to Schroeder van der Kolk, is almost always present in chronic constipation—then small doses act according to the law of similars.

In *diarrhoea* and in *dysentery* *nux vomica* in the usual tonic doses may be regarded as bearing a similar relationship, for, as has been noted, strychnine increases peristalsis, in some instances inducing decided looseness of the bowels. There is a condition, however, in which the tissues are relaxed and an excess of the succus intestinalis is present because of the relaxation of the blood vessels, wherein relief from *nux vomica* is due to its antipathic relationship to the existing condition.

In *debilitated conditions of the sexual apparatus of both sexes*, especially when due to loss of nerve force from whatever cause, *nux vomica* sometimes gives relief in the usual tonic doses according to the law of dissimilars. The same may be said of *general nervous debility*. In fact, in all states due to lack of proper innervation, *nux vomica* bears an antipathic relationship when given in moderate physiological therapeutic doses.

Spasmodic asthma, hysteria, and chorea, are relieved by the drug in accordance with the law of dissimilars; the condition of the

patient being that of lowered nervous vitality, *nux vomica* acting as a stimulant.

In cases of *epilepsy* not due to mechanical pressure, but to some central nervous trouble, *nux vomica* is frequently used. If the drug acts simply as a stimulant to a debilitated anaemic brain—as is sometimes the case, though, of course, the action of the drug is chiefly upon the spinal cord—then the law of dissimilars is laid under contribution. On the other hand, if nervous vitality is not lowered and the convulsions are due to an over-excited state of the nervous system, the therapeutic relationship is probably that of similars.

Retention of urine, or incontinence, may either be benefited by *nux vomica*; the drug acting as a simple stimulant when given in physiological doses. The same may be said of *prolapsus ani* dependent upon debility of the sphincter. In *functional aphonia* from debility of the vocal cords, the same relationship exists between the drug and the morbid condition.

Loss of taste, smell and hearing, due to nervous exhaustion, also stand in an anti-

pathic relation to *nux vomica* in physiological doses.

In *acute gastric catarrh*, or even in the *chronic form*, *nux vomica* frequently stimulates the relaxed mucous membrane, thus not only relieving the stomach condition directly, but also such reflex symptoms as headache, mental depression and irritability, according to antipathy.

In *paraplegia*, dependent upon softening and wasting of the cord, *nux vomica* is recommended by Brown-Sequard. It may also be useful in *plumbic poliomyelitis*. As these conditions are characterized by lack of nutrition of the parts affected, and as restoration to normal function requires improved nutrition, the benefit derived from *nux vomica* must be because of improved capillary circulation. This is caused either by sufficient increased heart action to normally fill the capillaries, or by dilating the capillaries directly. If the former is the *modus operandi* of *nux vomica*, the improved condition results from the law of dissimilars; if the latter, then the law of similars is responsible.

In dull, frontal *headache*, with concomitant acuteness of vision, or hearing, causing the patient to be annoyed by little things that usually are not noticed, together with mental irritability, due doubtless to a like heightened mental sensibility, *nux vomica* may prove curative. The dose, however, should be less than the usual physiological dose, because of the fact that such a quantity will probably add to the hypersensitive condition of the patient rather than relieve it; the patient of necessity being more sensitive to impressions acting upon the special senses in such a condition than when in usual health. As *nux vomica* has produced just such a condition in the healthy experimenter in physiological doses, the therapeutic relationship is here that of similars.

In the hypodermatic injection of strychnine into the substance of *chronically paralyzed muscles*, devised by Barwell many years ago, the drug no doubt acts antipathically in stimulating the nutrition of both nerve and muscle tissue. This practice has been found especially effective in cases of *infantile paralysis* of groups of muscles of long standing.

Tremors due to alcoholism sometimes find a remedy in *nux vomica*. The condition here existing is due to an exhausted state of the nervous system, and the drug in the usual physiological dose acts as a stimulant, consequently the law of dissimilars is illustrated.

When the capillary circulation is languid, with resulting *cold feet*, the recommendation of Dr. Anstie that *nux vomica* be prescribed, is in accordance with the same law.

In *nervous deafness*, due to impoverishment of the nervous system, the usual dose of *nux vomica* acts antipathically, but when the hearing is hypersensitive, the principle of similars is demonstrated by the use of the drug.

In *dry nasal catarrh*, with occasional oozing of water from the congested and temporarily hypertrophied mucous membrane, *nux vomica* in the usual physiological doses will cause an aggravation, because of the action of the drug upon the tissues, increasing the congestion, but when given in minuter doses short of producing an aggravation, benefit will result. The law of similars is here the therapeutic relationship.

Tetanus has been cured by the use of *nux vomica* in the usual physiological doses. The cause of tetanus being an irritated condition of the nervous system, due to temporary stimulation, the relationship between the disease state and the pathogenesis of the drug is doubtless that of similars.

In *prolapsus recti*, due to a relaxed condition of the sphincter ani, after returning the bowel to its normal position, physiological doses of *nux vomica* will sometimes prevent a return of the difficulty by restoring the normal tone to the muscle fibres, in accordance with the law of dissimilars.

The beneficial effects claimed for strychnine in *amaurosis* is doubtless due to the improvement in nutrition caused by the drug, the therapeutic principle demonstrated being that of dissimilars.

Hypodermic injections of strychnine are reported to have cured *dipsomania*. The condition existing in this derangement is that of an exhausted state of the nervous system, which causes a great craving for stimulation. Strychnine takes the place of the customary stimulant, and as a result the

patient is brought back to a normal status by improving his nutrition and restoring his ability to generate nerve force. Unless he have a good strong will, however, there is danger of the patient relapsing into his former intemperate habits when the strychnine is discontinued. Here the principle of therapeutics involved is undoubtedly that of dissimilars. The nitrate is the form in which the drug is here used.

Insomnia is sometimes relieved by strychnine. Lauder Brunton has used it successfully in cases resulting from mental exhaustion due to worry or overwork. "He gave it on the ground that the strongly stimulating action of strychnia might bring the system out of the condition of overfatigue into one of simple fatigue, which is itself conducive to sleep." In these cases of insomnia a general state of relaxation of the organism exists, even the brain capillaries not escaping; strychnine causes a contraction of the capillaries by stimulating the vaso-motor centre, and results follow in accordance with the law of dissimilars.

Anosmia has sometimes been relieved by snuffing the powder of strychnine 1-24th grain and starch 2 grains (Shoemaker); antipathy being the principle here involved.

As an *antidote to snake venom*, strychnine has not infrequently been employed, and sometimes successfully. The bite of the cobra, however, seems to defy this drug, according to Surgeon-Lieutenant R. H. Elliott, of the British army. In addition to local action upon the tissues with which it is brought into contact, serpent virus acts directly upon nerve centres, causing profound depression. By its stimulant action, strychnine, when it produces any effect at all, restores the overwhelmed organism in accordance with the law of dissimilars.

The *morning sickness* of pregnancy sometimes finds relief from "minute doses of the tincture, a drop, or a fraction of a drop" of *nux vomica*. It is a question just how the relief is brought about. The condition is, of course, reflex from the uterus, but a positive irritable state of the gastric mucous membrane results. If the drug modifies the condition by stimulating the stomach to resist,

then the therapeutic principle involved is that of dissimilars; but if the drug relieves the nervous sensibility—which sensibility is analogous to that caused by *nux vomica*—then the principle of similars may be regarded as responsible.

In the case of the *morning vomiting of drunkards* the relationship is plainly that of dissimilars, the drug acting as a tonic to the greatly relaxed mucous membrane of the stomach.

In *atony of the bladder sphincter* *nux vomica* will relieve the resulting incontinence of urine by its tonic action, thus illustrating the law of dissimilars. The same principle is responsible for any beneficial influence due to *nux* in *sexual neurasthenia*.

Because of its stimulant action upon so wide of field of functional activity, *nux vomica* is sometimes useful in *anaemia*, *amenorrhoea*, and even in *dysmenorrhoea*, because of the antipathic relationship to these conditions.

During the last few months of *gestation*, strychnine is sometimes used to “tone up” the uterine muscle fibres for the purpose of expediting labor. If the fibres are weak and

below par in tonicity, then of course the therapeutic principle concerned is that of dissimilars.

In cases of *habitual cold hands and feet*, the drug is recommended for the purpose of improving capillary circulation. Here the principle of action is that of similars, because of the fact that *nux vomica* is a stimulant to the vaso-motor centre, causing capillary constriction, and the condition for which it is prescribed is similar to the physiological action of the drug.

When the *genital organs are relaxed and erectile power impaired*, with or without functional spermatorrhoea, no organic defect existing, *nux vomica* is prescribed in accordance with the law of antipathy, the results following usually being but temporary.

In *torticollis*, or paresis of the muscles of one side of the body, causing *spinal curvature*, *nux* sometimes restores the muscular tissues to a normal nutritive state, the law of dissimilars being demonstrated thereby.

In the *night sweats of phthisis*, the drug acts probably by contracting the capillaries and thus limiting the amount of fluid placed

at the disposal of the sweat glands; the law of dissimilars being responsible for the cessation of the sweat, however temporary the relief may be.

The same principle is responsible for good results in *pneumonia*, *typhoid fever*, or other conditions in which the heart muscle is weak, when *nux vomica* is given in physiological doses. Strychnine is here usually employed. "The *functional irregularity of the heart's action accompanying hysteria, hypochondriasis, and pregnancy* is greatly relieved by moderate doses of tincture of *nux vomica*." (Butler.) The stimulant or antipathic effect of the drug is responsible for such results.

The *depression* caused by poisonous doses of *chloral*, *morphine*, or *physostigmine*, is sometimes obviated by 1-60th grain doses of *strychnia* hypodermatically, according to the principle of dissimilars.

As a *heart tonic*, strychnine or *nux vomica* act in accordance with the law of dissimilars. Strychnine, in the 60th of a grain hypodermatic doses, is most satisfactory in its effects in tendency to heart failure (unless fatty degeneration exist), or in ineffect-

ual labor pains due to atony of the uterine muscle fibre.

“Strychnine is an extremely serviceable remedy in the treatment of *cardiac diseases*, with weakness of muscle. In mitral insufficiency, we have seen it prolong life for years after the failure of digitalis, and when before its administration immediate death seemed inevitable.” (H. C. Wood.) Of course, antipathy is the principle here involved.

In cases of *arrest of heart action during chloroform anaesthesia*, Dr. H. Hare recommends the hypodermic injection of the 1-10th of a grain of strychnine, to be repeated in ten minutes if necessary. Antipathy is the principle of action.

Nux vomica is frequently used to restore the organism to its normal condition after the excessive use of all kinds of stimulating drugs, such as tobacco, tea, spirituous liquors, coffee, and highly-seasoned foods generally, besides habits of life which use up an undue proportion of nervous force and leave the patient in a debilitated condition. Under such circumstances the drug acts sim-

ply as a stimulant when given in the usual physiological doses. In case of the excessive use of other drugs the relationship is not that of antidote in the sense of neutralizing the effects directly, but is simply that of a powerful stimulant to nerve force, and the therapeutic relationship is that of dissimilars. The dose here applicable depends entirely upon the susceptibility of the sufferer, whose nervous system has been rendered hypersensitive to influences generally in some cases, while in others sensibility seems to be blunted. In the former cases an infinitesimal amount of *nux vomica* will have a decidedly beneficial effect, while in the latter the full physiological dose at least will be required.

Intermittent fever is sometimes cured by *nux vomica*. The indications upon which the drug may be prescribed are given as follows by Jousset: "Intense chill with almost dead fingers and blue nails, alternate chill and heat, heat with cerebral congestion, drowsiness during the heat, at times absence of sweat, constipation, rectal and vesical tenesmus, and usually thirst during the

whole three stages." Whether such cases are of malarial origin, with the plasmodium present, I am not prepared to say. The irregular character of the symptoms, which, taken together, constitute a paroxysm, bear a resemblance to the effects of *nux vomica* in causing irregular or spasmodic functioning of the nervous system when given to the healthy in toxic doses, but not when given in physiological doses. The state of the organism evidenced in the group of symptoms above noted, suggests the probability, nay, the certainty, that nerve force is at a low ebb, and when *nux vomica* is given in physiological therapeutic doses it acts as a stimulant, and consequently results follow in accordance with the law of dissimilars. *Nux vomica* is not generally regarded as a parasiticide, and when intermittent fever of malarial origin is cured by this agent it is doubtless because the affected organism is restored to a condition inimical to the plasmodium malariae.

IGNATIA.

THERAPEUTICS.

As already quoted from Phillips, "There is a very decided difference between the finer effects of ignatia and nux vomica that is not explainable by the results of chemical analysis; comparative clinical experience, however, will quickly demonstrate this to the careful observer. The two drugs are by no means interchangeable." In addition to this clinical experience of greater or less value, it is proper to again refer to the series of physiological experiments made with varied doses of the powdered bean and the tincture of ignatia, which are recorded in the Cyclopaedia of Drug Pathogenesis, and which suggest that even from a physiological view point nux vomica and ignatia have distinct individualities worth studying. Unfortunately, however, these experiments are not sufficiently systematized to render them more than suggestive.

Very few writers on materia medica suggest the use of ignatia in therapeutics, but among the few who do so the following con-

ditions are mentioned as sometimes benefited by the drug:

In *atonic dyspepsia* the bean acts antipathically when given in the usual physiological doses, no doubt owing its virtue largely to the contained strychnine. In *gastric* and *cerebral anaemia*, with concomitant *nausea and vomiting*, the same law is responsible for whatever benefit is derived from the drug.

Bartholow says: "It may be very useful in the various disturbances belonging to *chronic gastric catarrh*, but it is contraindicated in all acute inflammatory affections." Dissimilarity between the pathological condition and the physiological action of *ignatia* in this field declare the relationship here between the drug and the disease. Bartholow further remarks that *ignatia* "is not used in affections of the nervous system, the alkaloid strychnine being now universally employed." While this is true of a large number of physicians, it is also true that many others, at least as well versed in the knowledge of drug effects, do use *ignatia* in just such conditions, and aside from all suggestions to be found in physiological experi-

ments with ignatia, practical experience, as suggested by Phillips, teaches that the drug is quite frequently successfully used in diseases of the nervous system, particularly functional derangements in women. In conditions resulting from *fright*, or the shock of sudden bad news, *grief*, ignatia will sometimes produce wonderful results. *Hysterical manifestations*, *aphonia* or *deafness* from such causes will sometimes yield to this drug. It may be suggested that the therapeutic relationship here is probably that of dissimilarity. Such disturbances as *gastralgia* or *sick-headache*, which sometimes occur in nervous women as a result of impoverished blood, may be remedied by ignatia, which acts in the usual physiological doses as a tonic, and thus restores the organism and relieves the annoying conditions in accordance with the principle of dissimilars.

CHAPTER XIII.

Conclusions.

In concluding, attention may be called to the fundamental postulates upon which the arguments in the preceding pages have been based :

1st. The foundation of a medical education is a knowledge of medical ethics.

2nd. The problem which confronts the physician, is, the cure of the patient, not the disease.

3rd. A cause will always produce the same effect if all the conditions bearing upon its action are always the same, not otherwise.

4th. There are two therapeutic principles: antipathy, the law of dissimilars, and homoeopathy, the law of similars.

5th. The law of similars exists because of the law of dissimilars, and the law of dissimilars exists because of the law of similars.

6th. Allopathy is a method, not a principle, and isopathy exists only in name.

7th. All drugs which depend upon the *vis medicatrix naturæ* for their effects act in accordance with one of the two therapeutic laws. Mechanical, chemical, and antipathic measures act independently of this force.

8th. The law of similars may be applicable in either acute or chronic conditions; the law of dissimilars is most frequently applicable in acute conditions.

9th. Crude drugs cannot be so infinitesimally subdivided that the pathogenetic effects of the subdivisions and of the crude drug will not be alike in kind; the difference is in degree.

10th. Drugs do not act; it is the organism into which they may be introduced upon which effects following their ingestion depend.

11th. The only *dynamis* to be considered in the problem of drug influence upon the human organism, is the dynamis of the organism, the *vis medicatrix naturæ*.

12th. In dealing with massive doses of drugs, the relationships between them to be considered are those of the antidote and of

the analogue, respectively; while in dealing with drug dilutions the relationship of analogy only is of importance.

13th. A "totality" of symptoms is a most logical theory—assuming our knowledge of drug pathogenesis and of human pathology to be thorough and demonstrably correct; but in our present state of drug pathogenetic ignorance it is impracticable. The best the medical practitioner can do is to "cover" the majority of the patient's pathological manifestations.

14th. A correct diagnosis is a most important aid to successful therapeutics, but it is not always absolutely indispensable.

15th. Every physician should endeavor to avoid the alternation of drugs, but if he cannot find one drug to meet the necessities of the case, and if, in his judgment, "the greatest good to the patient" seems to demand more than one drug, he is justified in alternation.

17th. Drugs cause the organism into which they are introduced to assume two attitudes, successively; first, one for protection, an active attitude, and second, one of relaxation or rest, a passive attitude. The

evidences of an active attitude should be accepted as guides in therapeutics, and therefore, both antipathic and homoeopathic prescriptions should be based upon primary symptoms.

18th. For the purpose of securing positive effects in testing drugs upon the healthy, a standard of dosage should be adopted. The adoption of such a standard would give more uniform average results in average experimenters, and it is average therapeutic results that are of most importance to the physician, because the majority of his patients are average human beings.

19th. Because of the fact that the average patient is an average human being, a reasonable amount of generalizing is necessary for the practical application of homoeopathy.

20th. In the proving of drugs upon the healthy, Hahnemann's rules have never been consistently followed, and even had they been strictly observed the work resulting would not have reached the standard of modern scientific requirements.

21st. The pessimistic and skeptical attitude of so large a number of medical practi-

tioners of the present day is because of an absence of general agreement on so many points; disagreement upon which points could, in most instances, be reconciled were there a little more tolerance of the views of others. A consensus of opinion upon the most vital of the points in question would place the profession in a position for calmly weighing evidence, and as a result much of the lost confidence in the efficacy of drug therapeutics would be restored. Give the average physician faith in his records of physiological drug effects and he will soon forget his skepticism. There will ultimately be a reaction, and a normal faith in drugs will be restored.

22nd. A study of all efficient therapeutic methods is the only way by which the physician can qualify himself to secure "the greatest good to the patient."

CHAPTER XIV.

An Understanding of the Significance of Science and
of Art Essential to the Physician's Ability to Secure
"The Greatest Good to the Patient."

My task is done, and I have now but to give a little epilogue before stepping down among my fellows to wait for one who will, with clearer insight, lead us nearer the truths that as yet remain to be unveiled.

Because I have called attention to the need of charity for the honest beliefs of all men, even though they be enemies, and have avowed a belief in more therapeutic laws than one, does not in the least degree weaken my faith in the law of similars. Call this law by what name you will, yet it must stand for one of the eternal verities. It has existed from all time, and it will continue to be operative through all eternity.

Although this great law has been traduced by its enemies, misrepresented by its friends, and to the unthinking rendered absurd by

the fanaticism of zealots and the mistakes of well-meaning though inexperienced believers, yet through all enough of truth has been discernible to prove that homoeopathy rests upon a foundation that can neither be shaken nor hidden by foe nor by friend.

With truth for a foundation, why need the believer in homoeopathy, or in any other theory, system, or law, fear an investigation?

"Hew to the line, let the chips fall where they may," is a trifle too cavalier as a sentiment for dilettanteism, but within the limits of good ethics it should be the animating principle of every scientific mind. "*Sans peur, et sans reproche*," should be the consciousness that lightens the labor of every truth seeker; and, having worked sincerely and honestly, there need be no cause for fear. This should be the feeling of the believer in therapeutic law, while at the same time he recognizes his fallibility as a common shortcoming of humanity, and in all humility he should willingly submit his contributions to the probabilities of science for the examination of all other conscientious and expert workers in his field.

The failure to show the student the weakness as well as the strength of homoeopathy—or, more correctly, its proper sphere of applicability—is the cause of so much pessimism in later post graduate years. It is accountable for many doubting Thomases, for extreme high “potentists,” and for much unbalanced teaching and fanaticism. It is the cause of the evolution of the alleged homoeopathist who finds so much satisfaction in scoffing at science, and at the man whom he sneeringly calls a “scientific physician.” Such a scoffer has no conception of science. He embodies science in the person of some individual of excessive self-esteem, who has in some manner won his personal enmity. The following on this subject was published elsewhere some years ago: “Because students of science are at times unphilosophical and hasty in adopting conclusions and are weak enough to try to emphasize and magnify a pet theory, proves nothing against science, but it does prove human judgment fallible; it proves nothing more. Science in complete perfection is simply Divinity, and Divinity is God. The will of God (God’s

law) is expressed science, and it is the endeavor to understand these laws which constitutes 'man' a scientist. In such a sublime field of investigation, who should be freer from any desire for controversy or self assertion than the scientist? To speak of vexing the 'scientific soul'—as has been lately done—is an absurdity, inasmuch as it is an impossibility. God is the only 'scientific soul.' The true student of science will rarely take offense at an inexpert opinion of his work; he is not thinking of what men will say of him; he is quietly seeking for truth, testing what he finds, and offering it to be tested by expert workers like himself. All men are human, even the most scientific; but the greater and truer the scientist, the better will be his control of the human part of himself, his subjectivity. Some men are unfortunately numbered among scientists who follow the advice of Mephistopheles; they 'depose with knowledge, or without it, either,' but they are sure to depose. These men have not minds of a scientific cast, and it is they who bring discredit upon the student and the study of correct knowledge."

Some one has said that science builds from facts up to probabilities, to possibilities, while art builds from probabilities or from possibilities to facts. Science starts with the solid foundation work of the universe, and grows out into the region of probability; it does not go beyond what *may* be. Beyond this point we are without the pale of science. Just here it is that so many mistakes are made, so many misjudgments applied to the students of science. Necessarily students of science are fallible, as are all human beings, and they at times depart from the ways of science. As a result science is often misjudged.

The student of science may not be endowed with originality, he may lack imagination, he may not be possessed of the creative faculty, nor have inventive genius, and yet be a strict scientist; a man who applies the facts of science as he finds them. But the artist must have higher endowments than merely the imitative; he must be more than a mere routinist. He may, in addition to constructive powers, originaive ability, have all the qualifications of the scientist.

He may be able to take the fundamental suggestions, the basic facts of science, and work them up to his purposes, but without imagination he is less than an artist. After the perception of the artistic relationships of the things of the universe, imagination is the artist's necessity. Although the artist may wander far from the fields of science, he must be able to make his work assimilate harmoniously with the scientific facts which lie in the line of his specialty. And this ability makes of him an originator, a discoverer, mayhap a discoverer of some scientific principle; he becomes a pioneer, a leader. He may not fully appreciate the fact, but the highest type of artist is instinctively a scientist.

No man lives to himself alone; all work together to produce results that represent the whole artistic productive ability of mankind. This does not apply to one form of art alone, but it is universal. And all this combined result belongs to mankind; nothing is the result of the labor of one man. Each worker but adds his mite to the treasure-house of art.

No man can say, this is *my* work alone. He did not originate it; it is but the result of thought drawn from other creations not his, which were in turn evolved from other pre-existing forms of expression. One result is but the complement of other results. One man's artistic interpretation but fits in with other expressions of art like a great mosaic, to form one symmetrical whole.

All this applies to the physician equally as much as it does to the carver of stone, the wielder of the magic brush, the soul-stirring weaver of poetic charms, or the contriver of epoch-making machinery. As little as any other man does the physician live to himself alone; as little as any other artist does his work as an individual tell. It is for "the greatest good to" mankind, and it becomes rapidly merged in with the results of the work of mankind in the total sum of the product of this great class of artists, from which it soon becomes almost impossible to disentangle the work of the individual. Now and then a giant stands out conspicuous for some great achievement, and this giant forms the foundation upon which the

less artistic build structures which always are more or less suggestive of the work of the master after whom they are copied. But the master predominates for a time above his imitators, and shoulder to shoulder with his fellow giants his work goes down to posterity, though not as a final isolated product, but as a part of the artistic mass which has long since become the common property of mankind.

All this may sound discouraging to the novitiate student of medicine, but it need not be so. We are not all artists, and the work of all of us will not go down to posterity, but no one knows he is not an artist until he has tested his ability. It is no disgrace to lack the fine touch of the portrayer of the ideal. A great worker once said, if hard work is not genius, it is a very good substitute for it; and so it is that, although we may not all be artists, we may humbly follow in the footsteps of the artists and from them learn how to develop and accomplish ends from the practical suggestions made by them.

The artist deserves no praise for his work, unless performance of all duty deserves

praise. On the other hand, duty unfulfilled demands censure, and the artist who does not attempt to fulfil the possibilities of his nature, is derelict in his duty to his fellow-man and to himself; and his punishment will follow, not from his fellowmen, perhaps, but from the upbraidings of his own artistic standards.

We cannot add to, neither can we take from, our physical stature, and the physician who is not born with artistic instincts cannot compel their growth simply because of desire.

The artist feels the compelling force of his convictions; he is not dependent upon the opinion of man. He has a higher arbiter; it is his unerring standard of ideality, which, if satisfied, is sufficient. It is this approbation of internal conviction for which he strives. And it is this internal satisfaction to which the physician should look for approbation of his work. He should regard with respect the opinion of worthy peers, but when he has weighed the judgment of others he can adopt an honest course only with the approbation of his own judgment,

which, in proportion to the strength of his character, will make his decision consistent with his standards. Never should the physician dress himself in borrowed plumes; let him be known only by his own individuality. If he be an artist, never fear, the world will find him out in time; but if he be unimaginative, with no higher ideals than those of the rank and file of his fellows, he can never pose successfully as an artist.

If one be an artist, let him strive to carry out his highest ideals; if one be but a common workman, let him select his master and strive to execute with fidelity the ideal of the mind which has become his guide. But whatever one may be, let him be natural; let him strive to understand himself, and let him act with the consciousness that when he does the best he knows, with sincerity, he is but making the best use of his talents, be they few or many, and he can console himself with the fact that however much he may desire to attain an end, he cannot accomplish that which is beyond his strength, and that accountability is in proportion to knowledge and ability.

Whether the physician be of the artist type or one of the more lowly artisans of the profession, he can always make himself master of the fundamental principles of therapeutics, and familiarize himself with the significance of science and of art. This he owes as a duty to himself, to his profession, and to those upon whom he will be called to exercise his skill. In thus fitting himself for his life work he will be acting in harmony with the true spirit of science and exemplifying that great principle of medical ethics: "As ye would that men should do to you, do ye also to them, likewise," the practical application of which to the affairs of his professional life must in turn cause him to strive always to secure "the greatest good to the patient."

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